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15 Cents

The OIL and GAS JOURNAL

PRODUCING REFINING ENGINEERING MARKETING

Published Every Thursday TULSA, OKLAHOMA, JULY 18, 1929 $6.00 a Year

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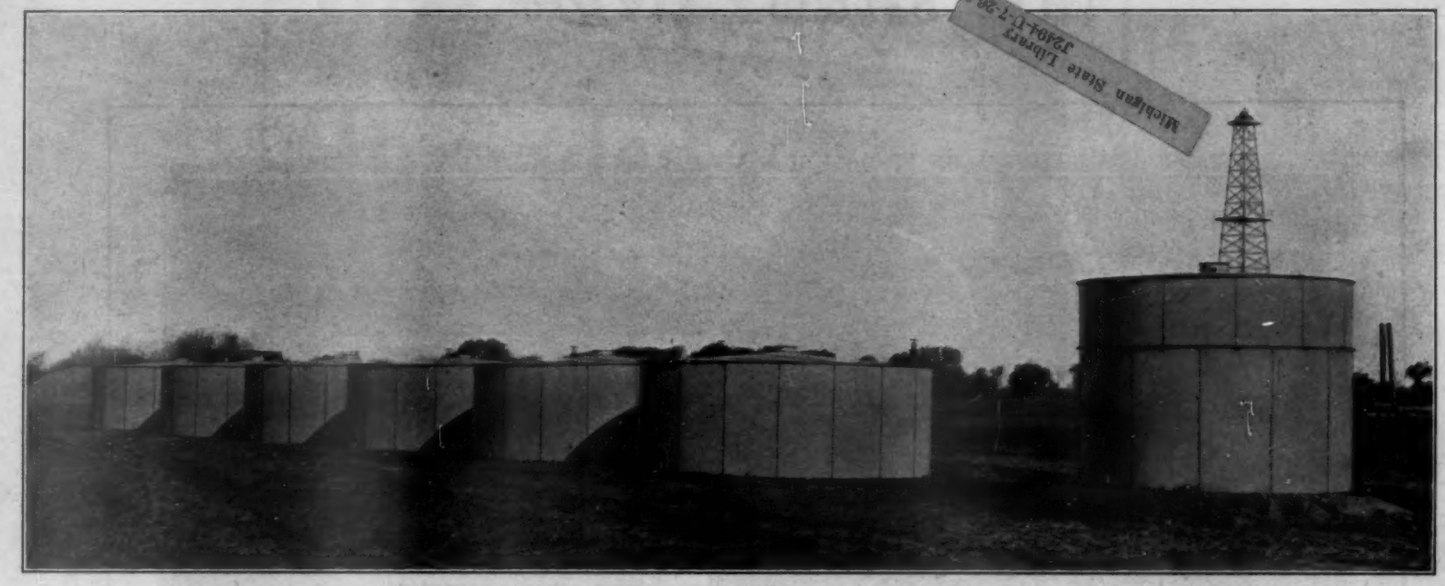

A SAFE INVESTMENT IN SAFE STORAGE

Maloneys afford *safe storage* for petroleum products, due to the vapor-tightness of our patented close-fitting "crimp" seams and joints, packed with our special pliable gasketing and dressed with our Gaso cement. We reinforce all seams, including deck seams, with rigid steel channels for lasting tightness.

And MALONEYS are a *safe investment* because their durability is assured by manufacture of durable, rust-resisting Keystone Copper Steel.

Other MALONEY advantages include: Bolts with a tensile strength of 90,000 lbs. instead of the ordinary 60,000 lbs.; large cleaning out plates set flush with bottoms; Maloney special pearl gray paint; the most desirable valves and thief-hatches.

The illustration shows one 375-Bbl. and six 500-Bbl. Maloneys used by Bu-Vi-Bar Petroleum Corp., Valley Center, Kansas.

"Alone in Quality"

MADE OF KEYSTONE COPPER STEEL

MALONEY TANK MFG. COMPANY
Tulsa, Okla., U. S. A.
Distributors at All Principal Petroleum Points

MADE OF KEYSTONE COPPER STEEL

Howell Aluminum "4-in-1" Vacuum Pressure Valve and Thief Hatch—The BEST and LATEST Deck Equipment—POSITIVE Safety

Sizes 12 to 10,000 Barrels

Packed in Steel-Bound Crates for Export

MALONEY PATENTED BOLTED COPPER-STEEL TANKS

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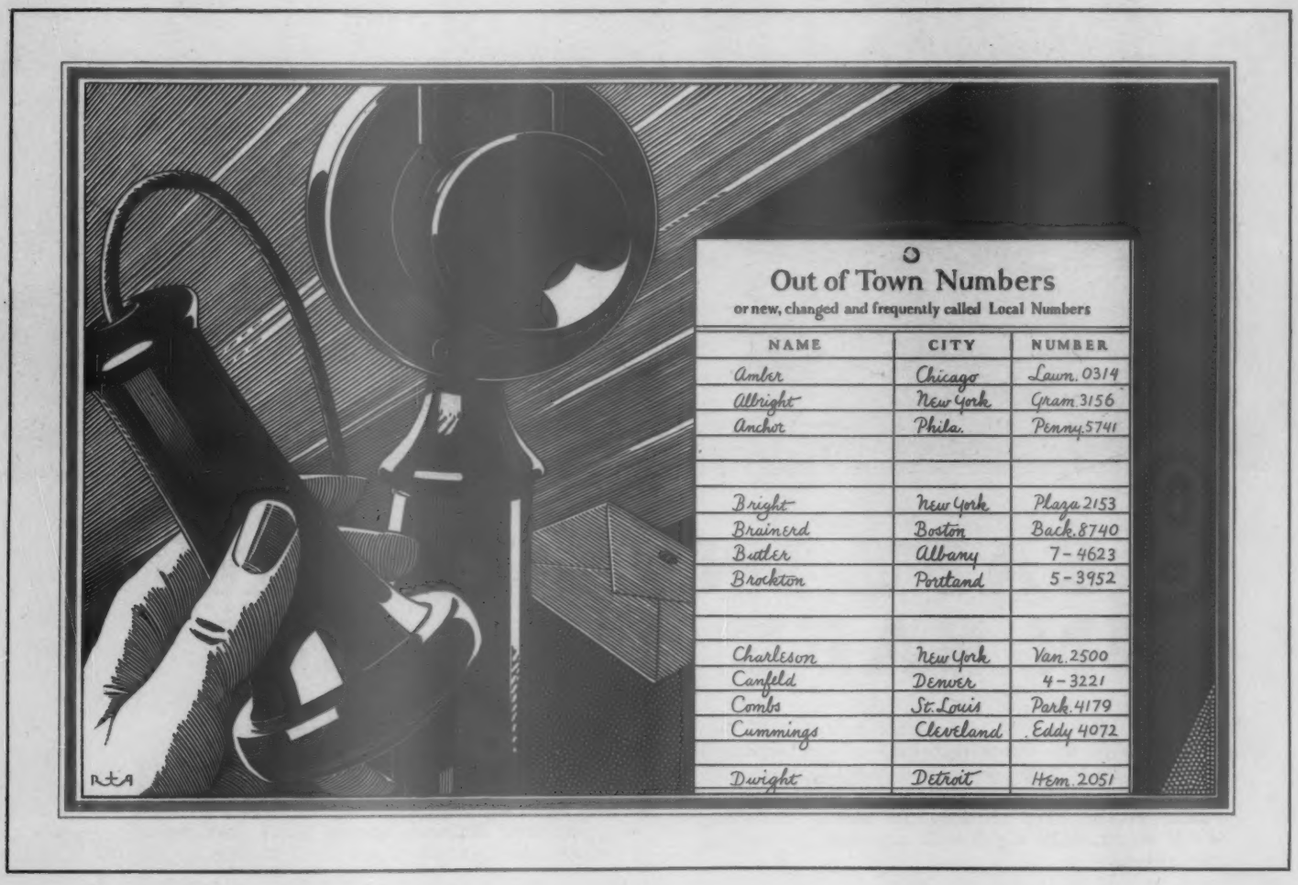
Calling by Number takes *less* Time . . .


Out of Town Numbers
or new, changed and frequently called Local Numbers
NAME CITY NUMBER
Amber Chicago Lawn. 0314
Albright New York Gram. 3156
Anchor Phila. Penny. 5741
Bright New York Plaza 2153
Brainerd Boston Back. 8740
Butler Albany 7-4623
Brockton Portland 5-3952
Charleson New York Van. 2500
Canfield Denver 4-3221
Combs St. Louis Park. 4179
Cummings Cleveland Eddy 4072
Dwight Detroit Hem. 2051

If you know the numbers on your out of town calls you can get many of them about as quickly as local calls. It is worth while keeping a list of numbers you frequently use. If you do not know them, "Information" will get them for you.

If there are a lot of them, write to the nearest Bell Telephone Business Office and ask them to make out the list for you.

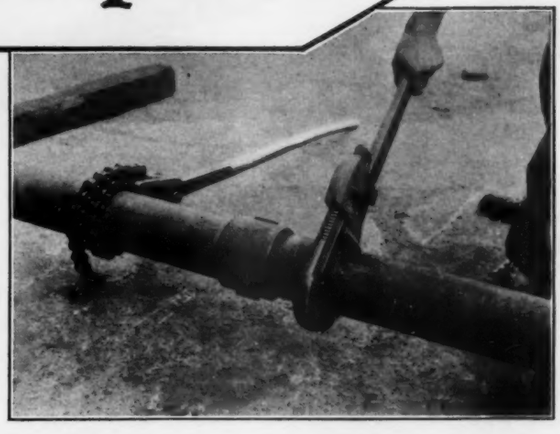
If you want some one in a hurry, the telephone number is as important as the street address. That is why many concerns print their telephone numbers on their letterheads and send their telephone numbers to all of their customers, asking them to telephone when some service or shipment is wanted in a rush. Making calls to other cities by number, and encouraging those dealing with you to call you by number, will further speed the growth of business by telephone. Bell Telephone Service is *Convenient . . Economical . . . Universal.*

AMERICAN TELEPHONE & TELEGRAPH CO. AND ASSOCIATED COMPANIES — BELL SYSTEM

WALWORTH C·N·I

Chrome-Nickel Iron

Threaded Pipe



Easy to cut and thread—

THE new Walworth C.N.I. (Chrome Nickel Iron) Threaded Pipe can be cut and threaded anywhere within its own length with either hand or power tools.

Hand pipe tools can also be used in making up pipe and fittings of this material as easily as ordinary threaded steel or wrought iron. No calking is necessary. Walworth C.N.I.

Easy to make up right on the job

Fittings, screwed and flanged, are available for piping lay-outs.

The pipe is furnished with threaded ends clean-cut and gauged to American standard pipe thread requirements. Every length is *air tested under water* and is shipped with thread protector on one end and C.N.I. coupling on the other.

WALWORTH

Walworth Company, General Sales Offices: 51 East 42nd St., New York
Plants at Boston, Mass.; Kewanee, Ill.; Greensburg, Pa.; and Attalla, Ala.

Distributors in Principal Cities of the World

Walworth International Co., 11 Broadway, New York, Foreign Representative
Walworth Company, Limited, 620 Cathcart St., Montreal, P. Q.

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Okla., under the Act of March 3, 1879.

One of the 52 (200-ampere) G-E arc welders being used by the Clark Welding Engineering Co. of Waco, Texas to weld the 205 mile (16-in.) pipe line from Jal, New Mexico to El Paso, Texas. (General contracting by Smith Brothers, Inc., Dallas, Texas.)

ARC WELD *your* PIPE LINES

Mile after mile of new oil pipe line is proving the economy and superiority of arc-welded field joints. Twenty-five per cent faster and twenty-five per cent lower in cost than gas welding, the trend of construction is definitely toward arc welding.

Figures reported by a contractor for a recent 20-inch pipe-line installation showed that arc-welded joints averaged two dollars less in cost than gas-welded joints.

Thus the saving on 80 miles of 20-inch pipe, electric field-welded at the rate of ½ mile per day, would pay for the cost of the 14 arc welders required for the job.

In the extensive pipe-line program now under way in the Southwest, General Electric engineers and more than 100 G-E arc-welding equipments are playing a leading part. The contractors now building the 205-mile El Paso Utilities line and the Texas Pipe Line Company's 600-mile line (from Monahans to Port Arthur, Texas) are both employing G-E arc-welding equipment.

We cordially invite all general contractors and welding contractors to consult our welded-pipe-line files—which are most complete. Simply get in touch with your nearest G-E office.

THE MORE YOU SAVE THE BETTER YOUR PRODUCT

JOIN US IN THE GENERAL ELECTRIC HOUR, BROADCAST EVERY SATURDAY AT 8 P.M., E.S.T. ON A NATION-WIDE N.B.C. CHAIN

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN PRINCIPAL CITIES

KILL FIRE WHILE IT IS YOUNG

FOAMITE Generators in three sizes

If you have medium size or small oil tanks—single tanks, or groups of two or three—FOAMITE Foam Generators offer you ideal protection from fire.

FOAMITE Generators smother fire with the same high grade of *Firefoam* produced by the FOAMITE Two-solution System, almost universally used for large tank farm protection. A *single* powder, FOAMITE Generator Powder, poured into the Generator hopper, automatically mixes with flowing water and *Firefoam* is discharged. There are no fancy adjustments. These fire-fighters are simple in operation, rugged in construction.

FOAMITE Foam Generators are made in three sizes. Conservatively rated, a FOAMITE System employing a single Model 15 FOAMITE Generator will protect a 25-foot tank. One Model 25 will protect a 45-foot tank. One Model 30 will protect a 65-foot tank. Two or more will protect larger tanks.

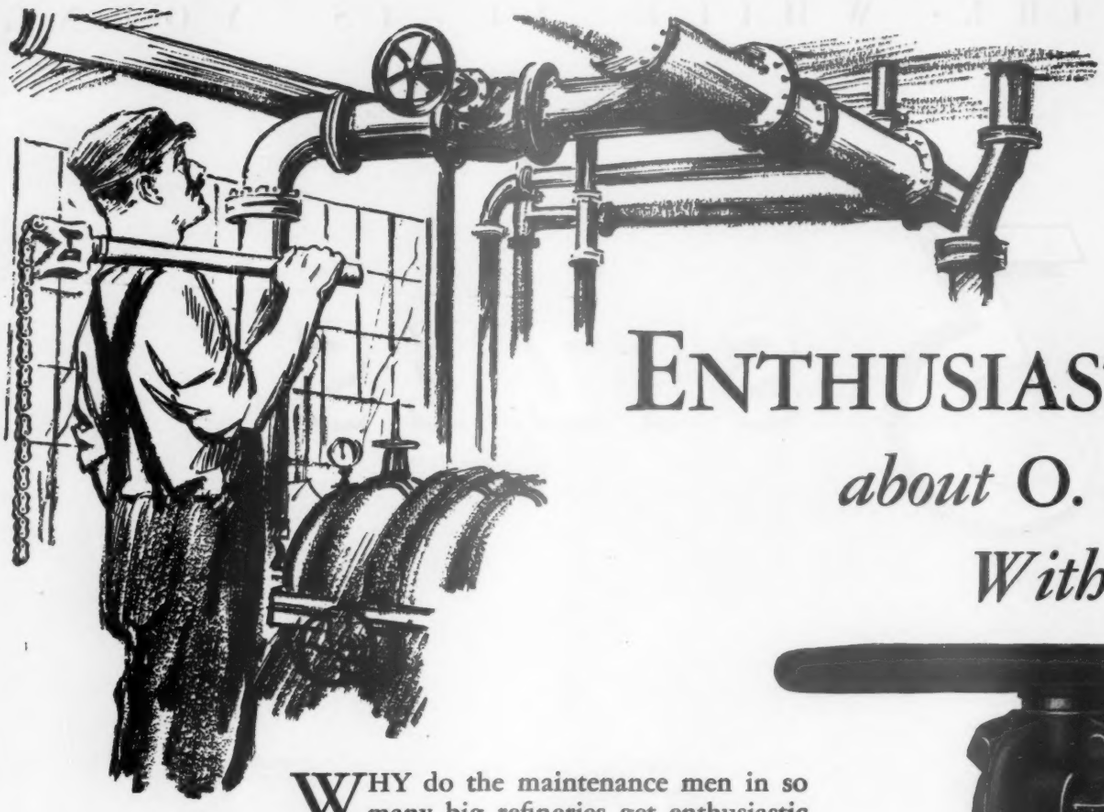
Of course, the conditions that surround each risk differ. An American-LaFrance and Foamite representative can study your property and suggest the best layout for FOAMITE Generators or Generator Systems. Representatives are located at points convenient to all principal producing and refining centers.

American-LaFrance and Foamite Corporation, Engineers and Manufacturers, Dept. F30, Elmira, N. Y.

AMERICAN-LA FRANCE AND FOAMITE PROTECTION

A Complete Engineering Service

For Extinguishing Fires



ENTHUSIASTIC
about O. I. C.'s—
With Reason

WHY do the maintenance men in so many big refineries get enthusiastic about O. I. C. valves?

First, because they are the skilled workmen in each plant who watch the lines, fittings, valves and they are close enough to line performance to discern any weak spots.

They know whether the plant engineer specified the best type of valve in each case. They know there is a proper O. I. C. valve for every line condition; and that O. I. C.'s require minimum attention and upkeep.

Thus, your men in direct contact with pipe maintenance know that O. I. C. valves are a practical aid in reducing operating costs.

This particular valve is No. 329, Extra Heavy Wedge Gate type, with outside screw and yoke rising stem. It is built in all standard iron pipe sizes from 1¼ in. to 16 in. This O. I. C. valve should be specified on lines carrying up to 250 lbs. saturated steam pressure; or super-heated steam with a maximum temperature of 500 degrees. This valve is tested to 800 lbs. hydraulic pressure.

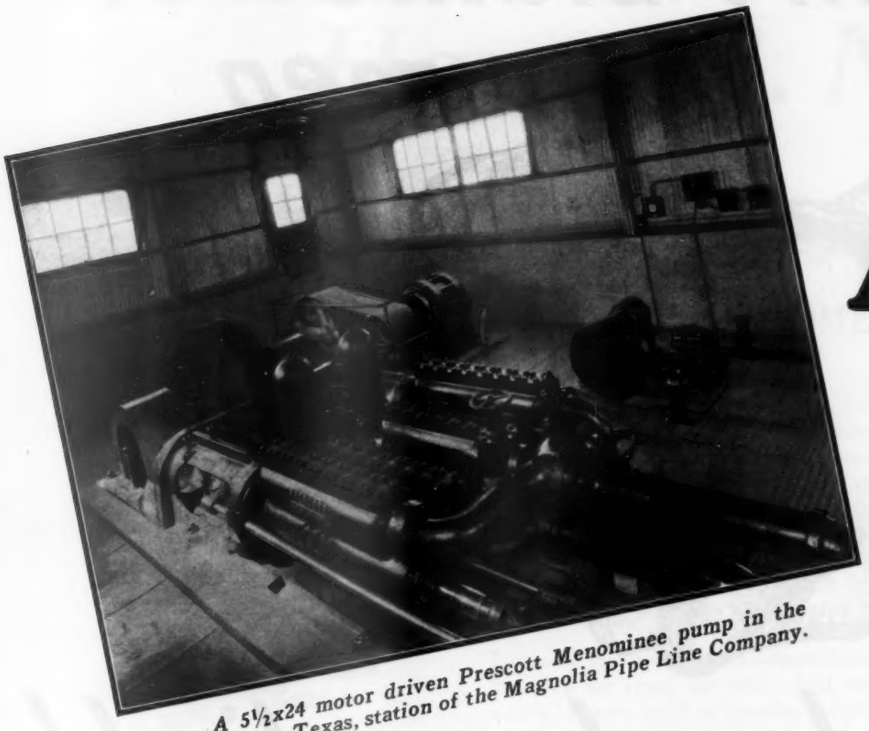
Handy reference catalog showing all O. I. C. valve specifications will be sent you gladly upon request

THE OHIO INJECTOR COMPANY
WADSWORTH, OHIO

"Chicago" Injectors and O. I. C. Valves are carried in Stock and Distributed by all Leading Supply Stores in the Oil Country.

OIC

Prescott Menominee Pumps are ALWAYS ON THE JOB



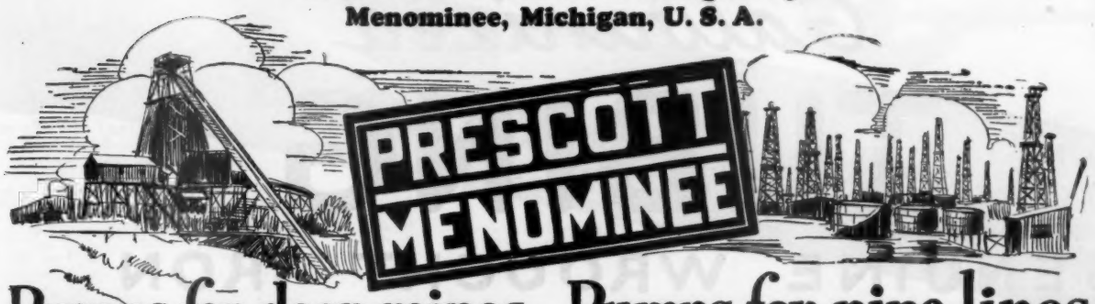
A 5½x24 motor driven Prescott Menominee pump in the Pampa, Texas, station of the Magnolia Pipe Line Company.

DAY in and day out, year in and year out, Prescott Menominee pumps are working — efficiently and economically. You'll find them everywhere. They are either electric motor or engine driven and operate at high efficiencies over a wide range of operation. Changes in pressure or capacity requirements do not cause any material lowering of mechanical efficiency.

Practical men prefer Prescott Menominee pumps because of their great economy. Actual performance records show the low power requirements of these pumps and the almost negligible maintenance costs. Long service has proven their extreme reliability and general excellence for pipe line use.

We will appreciate the opportunity of sending you detailed performance data, or any information which will help you meet your pumping requirements.

The Prescott Company
Menominee, Michigan, U. S. A.



Pumps for deep mines ~ Pumps for pipe lines

O&GJ 7-18 Gray

You can't blame your men

— if their hands are tied!

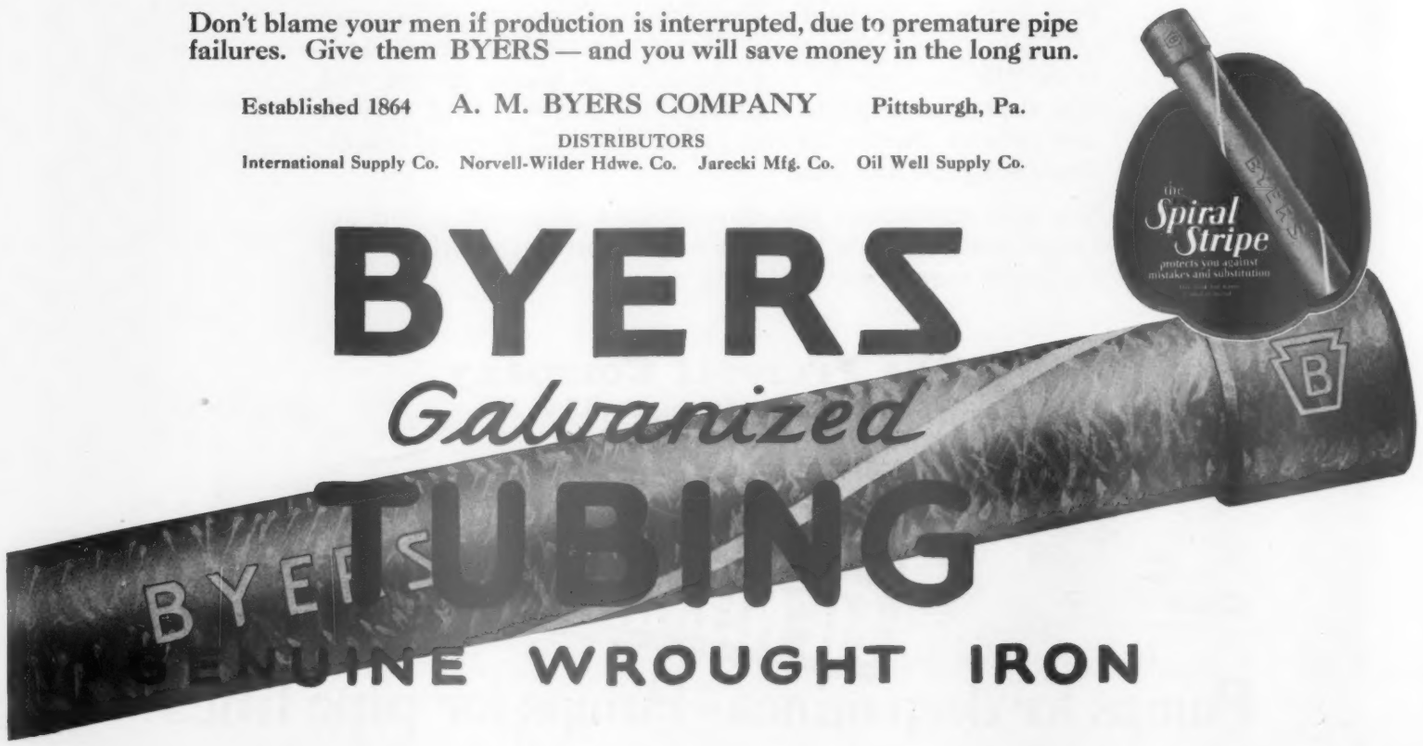
When your men "on the ground" ask for wrought iron tubing, make it available for them. They know that genuine wrought iron, such as BYERS, will show a service life from 100% to 500% greater than common tubing. They know that actual service records, made under severely corrosive conditions, demonstrate conclusively that BYERS TUBING resists corrosion and failure to a very high degree.

Don't blame your men if production is interrupted, due to premature pipe failures. Give them BYERS — and you will save money in the long run.

Established 1864 A. M. BYERS COMPANY Pittsburgh, Pa.

DISTRIBUTORS

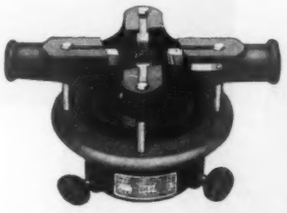
International Supply Co. Norvell-Wilder Hdwe. Co. Jarecki Mfg. Co. Oil Well Supply Co.



BYERS Galvanized TUBING

A Letter From Harry G. Nye

TO THE OIL MEN OF THE U. S. A.

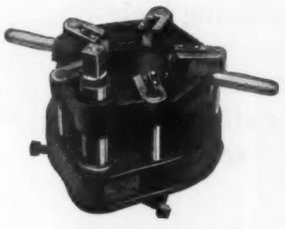


Nye No. 1 (Toledo Type) Stock

The rugged construction and few working parts account for the simplicity and durability of these Nye Receding models. They do the work easily and efficiently.
No. 1 Nye Receding Pipe Threader, complete ..... $9.60 net
West of Rocky Mountains $10.80

Nye No. 1A (Toledo Type) Stock

The No. 1A is the same as the No. 1 except that it is equipped with a rachet for work where space is restricted.
No. 1A Nye Receding Pipe Thr ader, complete ..... $12.00 net
West of Rocky Mountains $13.50



Nye No. 2 (Toledo Type) Geared Threading Device Improved

Capacity 2½ in. to 4 in. inclusive.
Net price complete $50.00
West of Rocky Mountains 55.00
FREE TRIAL—ABSOLUTELY GUARANTEED

Nye (Toledo Type) Chasers Fit Nos. 1, 1A and 2 Nye (Toledo Type) Stocks

Each set is guaranteed in every particular. Will cut much easier than other similar dies.
No. 1, 1" to 1½" ..... $ .75 per set net
No. 1, 2" ..... 1.25 per set net
No. 2, 2½" to 4" ..... 3.60 per set net

"WHAT WITH THE WOMEN AND EVERYTHING"

FELLOW CITIZENS:

Well, I see the cigarette people come right out now and advertise to the women, showing that the world does move, although we aren't sure in which direction. It is getting so some women do about everything that most men do.

And it certainly is getting harder and harder to get a chair in a barber shop. Of course, a lot of the women are letting their hair grow now, but the men came to that long ago. They couldn't get it cut, so they just let it grow.

No co-ed has made the All-American football team yet, except individually, but give her time, she will. And when the coach says that what the team needs is more beef, at last the fat girl will come into her own.

Yes, sir, you may see the time when a woman is presidentess of the United States, and the Bloomer Girls win the world's series. The only thing that may beat 'em will be that they will probably hang around third base and won't want to go home.

What with the women and everything, the world is getting so it isn't a safe place for the men, and it never was. When a girl hangs around a young man now-a-days, it isn't the young man she's after. She's after his job.

There are only a few things that a man can do that a woman can't do, and it doesn't bother her, because she knows she can always get some man to do it for her. It's funny how they call women the weaker sex, when it's the men who weaken.

So far there aren't many women in the oil business, but brace yourselves, boys, it's coming sure as shooting. Some day you will see pipe tied up with pink ribbon, and things will be where you can find 'em. You just won't recognize the field.

Let's hope, when that day comes, that the fields are all equipped with nothing but Nye Tools. I hate to hear a woman swear.

Sympathetically yours,
HARRY G. NYE.

Nye Three-Wheel Pipe Cutter Barnes Type

Equipped with Three Nye Knurled Cutter Wheels

No. 1 ..... $ 2.48 net
No. 2 ..... 3.30 net
No. 3 ..... 5.50 net
No. 4 ..... 11.00 net
No. 5 ..... 16.50 net
No. 6 ..... 22.00 net

NYE Saunders Pattern Pipe Cutter

The Nye Saunders type pipe cutter is equipped with Nye knurled wheels. All parts are interchangeable.

No. 1 ..... $ 2.00 net
No. 2 ..... 3.00 net
No. 3 ..... 7.33 net
No. 4 ..... 12.00 net
No. 5 ..... 18.67 net

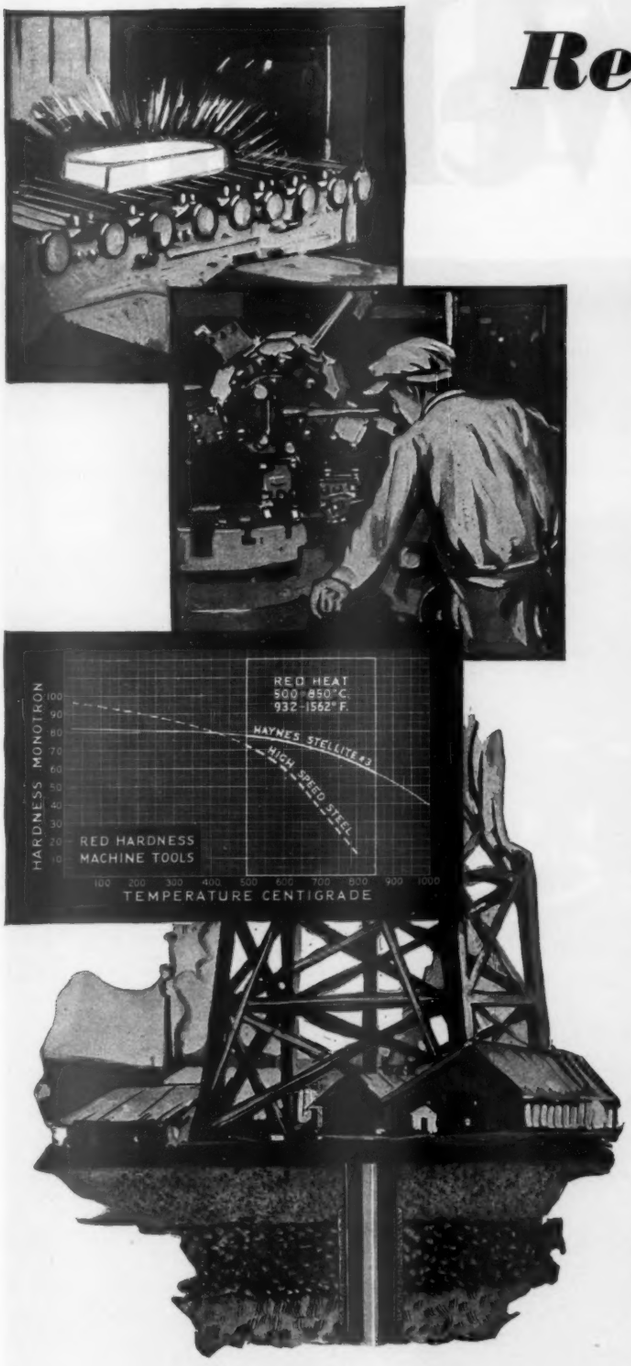
Swabs . .
Packers . .
Rings

Republic's long experience in the oil fields explains the superior quality of any Republic molded or lathe cut item.

IF you first inquire into the actual service records of all brands of mechanical rubber goods you will eventually buy Republic. But it is only fair to mention that Republic's success in placing high grade merchandise on the market at competitive prices has been partly due to efficient distributor handling. And since an Industrial Supply Distributor can serve a consumer even more effectively in keeping down costs, it is suggested you use every facility he offers. Ask your distributor about Republic rubber.

THE REPUBLIC RUBBER CO.
Youngstown, Ohio

Belting — Packing — Hose
Molded Goods — Lathe Cut Goods



Red Hardness— What Is It?

RED HARDNESS is the hardness of a metal measured when it is red hot or at a temperature between 900° Fahrenheit and 1600° Fahrenheit.

Cold hardness is no indication of the hardness of a metal when at a red heat. One alloy may be harder than another when both are cold, but considerably softer when both are red hot.

There are two methods for estimating red hardness. One is used in the laboratory, and gives exact scientific values as shown in the chart; the other method compares the cutting quality and abrasion resistance of the alloys when in use.

[This is the first of a series of three advertisements on this interesting subject—Watch for the other two]

HAYNES STELLITE COMPANY

Unit of Union Carbide and Carbon Corporation

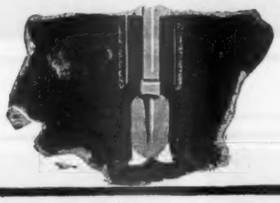
UCC

DISTRICT SALES OFFICES

Chicago—Carbide and Carbon Bldg.
Detroit—4-240 General Motors Bldg.
Los Angeles—1310 Santee Street
San Francisco—114 Sansome Street
Cleveland—628 Keith Bldg.
Houston—6119 Harrisburg Blvd.
New York—30 East 42nd Street
Tulsa—Exchange National Bank Bldg.

General Offices—Kokomo, Indiana

Haynes Stellite welding rod is also available from any of the 28 District Sales Offices of Oxweld Acetylene Company



Stelliting with

HAYNES STELLITE

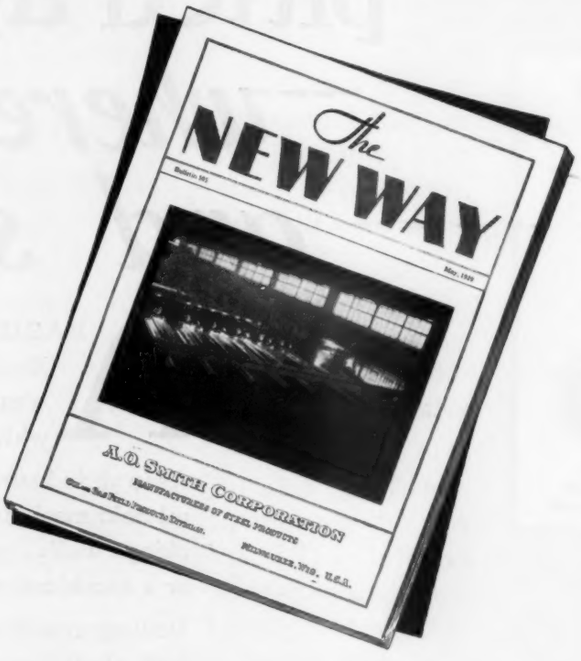
SMITH Welding

SMITHWELDED

The NEW WAY

If you have not seen the book that deals with the manufacture and advantages of SMITHWelded Oil and Gas Line Pipe, send today for your copy of The New Way.

It also contains valuable engineering data.



A. O. SMITH CORPORATION

Oil and Gas Field Products Division

General Offices: MILWAUKEE, WISCONSIN

District Offices at: New York, Tulsa, Houston, Los Angeles

LINE PIPE

an economic force pitted against waste —*wherever wheels and shafts turn*

A BASIC idea thirty years ago, "Timken Bearing Equipped" is today an economic force pitted against waste . . . typifying a huge replacement program which sweeps all before it.

As in all industry, manufacturers of all types of Timken-equipped oil field machinery find in Timken *the one bearing that does all things well* . . . whether the loads are all *radial* . . . all *thrust* . . . *or a combination of both.*

Drilling machines, gasoline and steam engines, pumping units, jack shafts, sand reels, countershafts, crown blocks, oil well hooks, pumps, compressors, electric motors, gear reduction units . . . all have yielded to the tremendous power and lubrication savings, maintenance elimination and endurance made possible only by the exclusive combination of Timken tapered construction . . . Timken *POSITIVELY ALIGNED ROLLS* . . . and Timken steel.

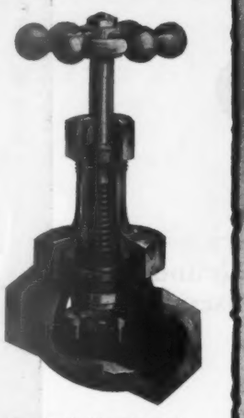
"Timken-Equipped" represents the difference between waste and conservation, between antiquated and modern . . . a deciding factor in building and buying mechanical equipment . . . wherever wheels and shafts turn.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

The Swing to Better Valves in the Oil Industry

LUNKENHEIMER "FERRENEWO" VALVES IN OIL FIELD SERVICE IN OKLAHOMA.



Iron Body "Ferrenewo"
150 lb. W. S. P.

Bronze "Renewo"
Medium-200 lb. W. S. P.
Extra Heavy-300 lb. W. S. P.

In these days of keen competition, the oil and gas industry realizes the importance of installing high grade valves to effectively control the flow of steam, gas, oil and other liquids without wasteful leakage.

Fighting hard to reduce production costs, the Industry is buying valves on the basis of *Ultimate* cost over long periods of time. Lower maintenance expense, increased safety and less time out for delays are the deciding factors which influence valve purchases.

So it is, that in practically all oil and gas fields, Lunkenheimer Valves will be found showing the way to better service and lower valve costs. They bring to the Industry a time-tested and time-honored product that always measures up to the exacting requirements of the most discriminating valve users.

For the utmost in valve value specify and insist upon getting "Lunkenheimer."

Distributors are located in all oil centers. They will fill your requirements promptly.

The Lunkenheimer Company manufactures a complete line of Bronze, Iron and Steel Gate, Globe, Angle, Check, Blow-off, Non-return, Pop Safety and Relief, Lubricators, Oil Pumps, Oil and Grease Cups, Whistles, Cocks, Fittings, etc. Literature describing any of these products will be sent upon request.

AMERICA'S BEST
LUNKENHEIMER
QUALITY
SINCE 1862

THE LUNKENHEIMER CO.
"QUALITY"
CINCINNATI, OHIO, U. S. A.
NEW YORK CHICAGO BOSTON PHILADELPHIA
PITTSBURGH SAN FRANCISCO LONDON
EXPORT DEPT. 318-322 HUDSON ST., NEW YORK

102-53-91

In Africa, too

"The HIGHER STANDARD"

Drillers in Africa have the same advantage as drillers in America—they drill and fish with Spang Weldless Jars. With Jars so tough and strong and safe, making hole is swift, sure, economical. The absence of welds means an absence of trouble.

A Spang Wire Line Clamp is also being used by this crew and their dusky helpers.

Spang Weldless Jars are standard equipment in all fields, domestic and foreign. Over 300 leading Supply Stores carry them in stock.

SPANG & COMPANY

BUTLER, PA.

The HIGHER STANDARD

SPANG

WELDLESS JARS

Specify Oxwelding Under Linde Procedure Control

GAS and oil pipe lines require joints that are 100% efficient—as strong as the pipe, tough, ductile, and permanently leakproof. Linde Procedure Control for welding applied to the construction of thousands of miles of Oxwelded lines has assured permanent tightness — minimum leakage losses — and lasting satisfaction in their operation.

Pioneers in Procedure Control for Welding

LINDE OXYGEN
The Linde Air Products Co.

~

Prest-O-Lite
Dissolved Acetylene
The Prest-O-Lite Co., Inc.

~

Oxweld
Apparatus and Supplies
Oxweld Acetylene Co.

~

UNION CARBIDE
Union Carbide Sales Co.

Units of
UNION CARBIDE AND CARBON CORPORATION

General Offices
30 East 42nd Street, N. Y. C.

UCC

Sales Offices
In principal cities of the country

64 Linde Plants—45 Prest-O-Lite Plants—154 Oxygen Warehouse Stocks—138 Acetylene Warehouse Stocks—38 Apparatus Warehouse Stocks—235 Carbide Warehouse Stocks

RELY ON INTERNATIONAL HARVESTER TRUCKS and POWER

A HEAVY LOAD *like this calls for a rugged International Heavy-Duty with plenty of stamina and power.*

These Famous Trucks, Tractors, and Power Units Will Serve You Well

INTERNATIONAL HARVESTER'S 2½, 3½, and 5-ton Heavy-Duty trucks are built for the hardest work in oil fields—built to like it and built to stand the gaff. Their big, vibration-free engines and 5-speed transmissions combine to give you great pulling power, and time-saving speed for getting back quickly when the pay load is disposed of.

International Heavy-Duties are *work trucks,* all the way through. Their performance has won the respect and admiration of oil men everywhere. You'll be proud to have them carry your name and haul your loads.

• • •

There is practically no limit to the usefulness of the McCormick-Deering Industrial Tractor when it goes into service in oil fields. It delivers its power in three ways—through drawbar, belt, or power take-off, or combinations of these. It pulls, pushes, and lifts. It will run separate or inbuilt machines. It combines with an almost endless variety of equipment. Our representative will outline its adaptability for your work, on request. Write for our folder "Tractor Power in Industry."

(At Right) *Drilling on a lease of the Siosi Oil Co., with a McCormick-Deering Industrial Tractor.*

The McCormick-Deering Power Unit delivers 28.9 h. p. (S. A. E.) of steady, useful energy at 1000 r. p. m. When your work calls for stationary power, specify this unit.

Company-owned International branches at 172 points in the United States and Canada, are ready to show you the Heavy-Duty Internationals, the McCormick-Deering Industrial Tractor, or the Power Unit. They will show you the full line of speed trucks—¾, 1, 1¼, 1½, and 2-ton capacities, and the factory-standard, after-sale service that stands back of every Harvester Product. Descriptive literature sent on request. Address

INTERNATIONAL

INTERNATIONAL HARVESTER COMPANY
of America (Incorporated)
606 So. Michigan Ave. Chicago, Illinois

HAZARD

Olympic Rotary Lines

HERE are two more examples of rotary drilling line efficiency and economy.

Hazard "Olympic" rotary line is being used on both rigs illustrated. Each line has previously completed another well.

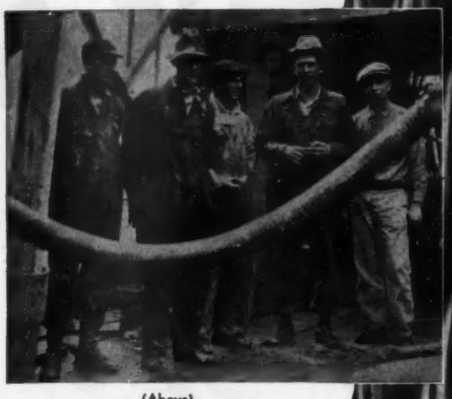
The line used on Mead Bros., Inc., rig has drilled over 10,000 feet. The other line is close to that mark. Both lines are in excellent shape.

Records like these are the best evidence of the low cost, efficient service you can expect from Hazard Lines. Be sure you specify Hazard "Olympic" for your next rotary operation.

IMMEDIATE SHIPMENT FROM BRANCHES AND DISTRIBUTORS LISTED

There's a Hazard Line for every oil country service

DRILLING LINES
FLEX-SET PRE-FORMED ROTARY LINES
CASING LINES
SUCKER ROD LINES
SAND AND MANDREL LINES



(Above)
Dailey Markham Drilling Co., rig on Harjoshie No. 4, Gypsy Oil Co., Mission Pool, using 1" x 1250' Hazard Olympic Rotary line. Also the second well for this line.
Earl Bridges, Driller — M. L. Beaver, Roughneck
J. G. Copeland, Roughneck — Tom Riley, Roughneck
Jack Campbell, Roughneck

(Below)
One of Mead Bros., rigs on J Neal No. 4, Minnehoma Oil & Gas Co., in the Mission pool, using a 1" x 1250' Hazard Olympic Rotary line. This is the second well for this line.
Jean Lambert, Driller — J. E. Jones, Roughneck
Fred Velvin, Roughneck — C. A. Sneed, Roughneck

Both lines supplied by The Bovaird Supply Co.

HAZARD WIRE ROPE COMPANY
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UNITED OIL WELL & SUPPLY CO.
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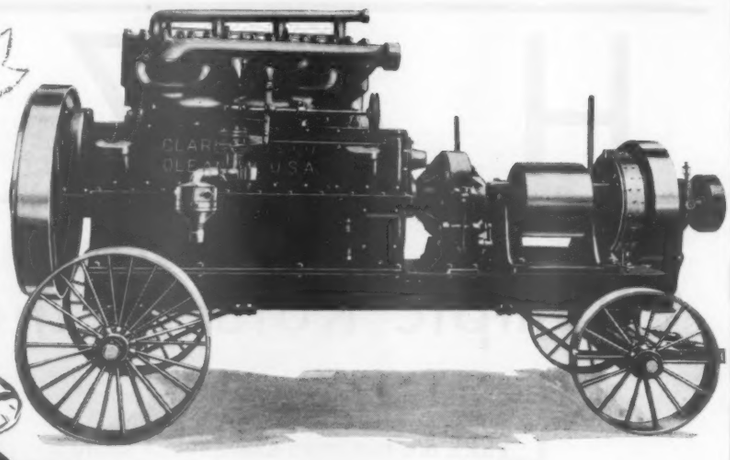
GOING DOWN



The CLARK SENIOR DRILLING ENGINE enables the operator to put down a hole at the very minimum cost in money and time.

The engine furnishes ample power for all drilling operations—maintains maximum power at maximum speed indefinitely—gives the desired slow drilling motion. It operates on approximately 7,000 feet of gas or 75 gallons of gasoline daily. There is no water or scale cleaning expense.

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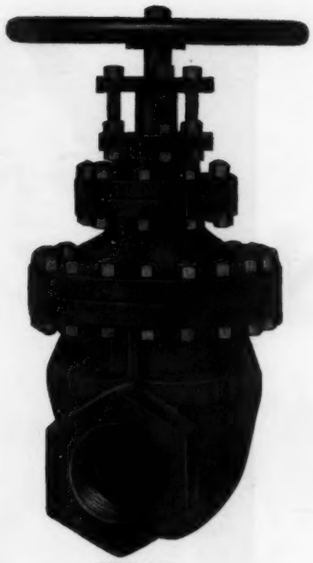
CLARK

TYPE 6-S



TYPE 6-D

TYPE 6-M

Type 6-S Threaded 6⅝ API
Test 5000—Weight 1875 lbs.

Type 6-D Threaded 6⅝ API
Test 3000—Weight 910 lbs.

Type 6-M Threaded 6⅝ API
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A new line of High Pressure Drilling Valves, Flow Line Valves and Christmas Tree Fittings,—designed and developed to keep pace with the extreme pressures being encountered in modern deep drilling practice.—These new valves and fittings will be known as the *Kerotest Supertest* and will have a certified kerosene test of 5000 pounds per square inch.—

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The flexible cup construction of the Guiberson Swab enables it to give far better service, with a noticeable absence of casing wear. The flexible cups do not press a hard, contacting surface against the casing wall, but a movable, yet sealing surface, which gives way to protrusions, at the same time retaining the full load of fluid. It never sticks in the hole and, in running in, the flexible cups collapse, allowing far speedier passage for the swab. The Guiberson Swab is doing most of the world's swabbing today.

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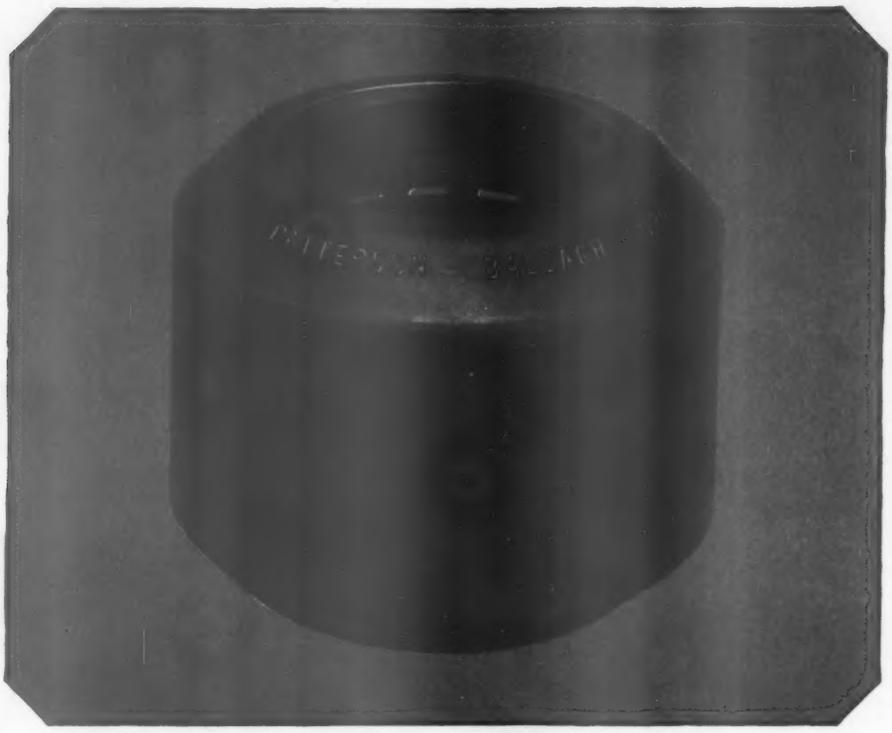

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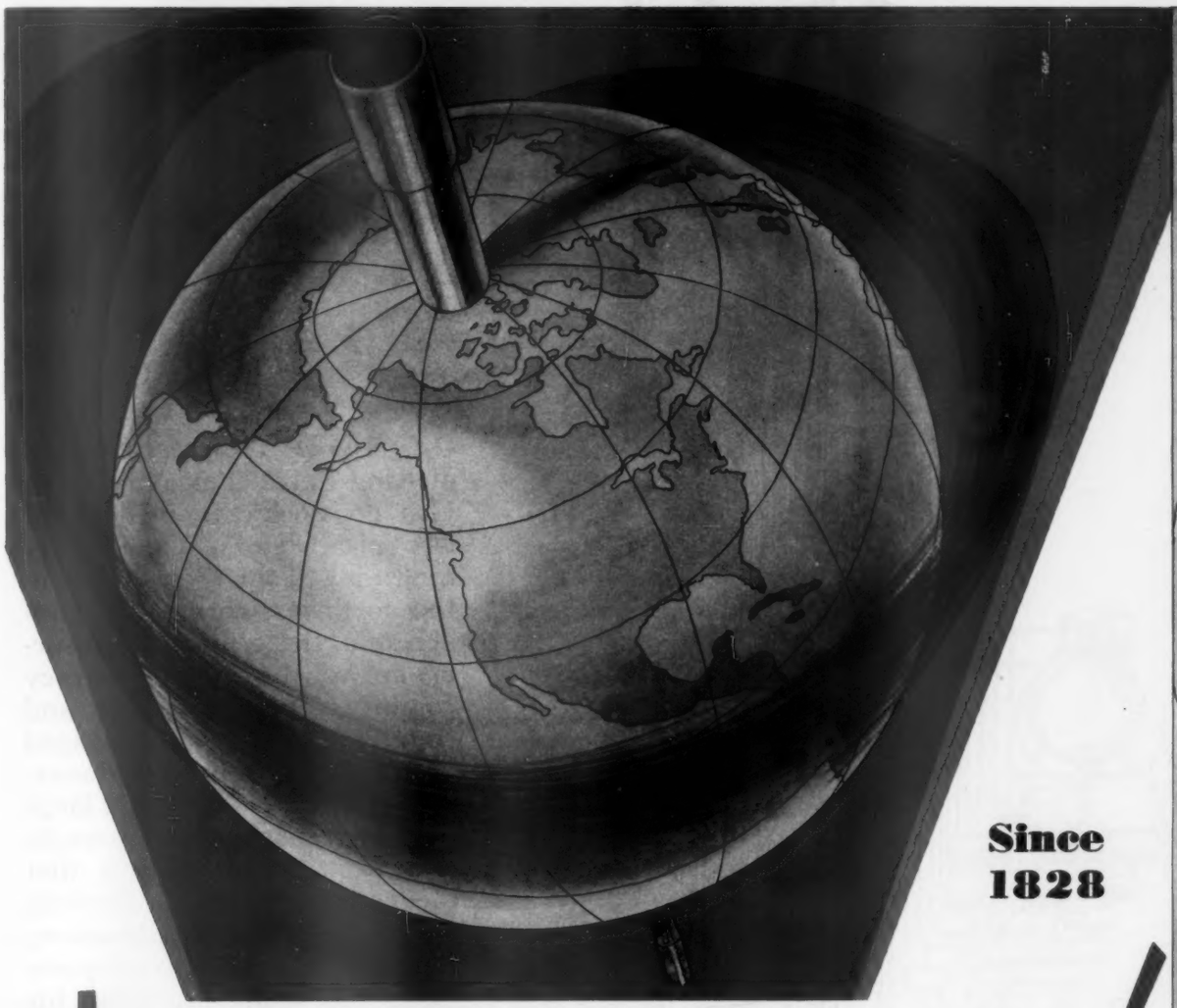

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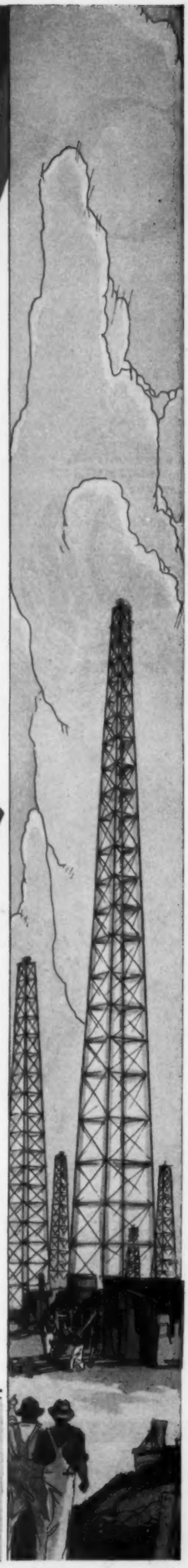

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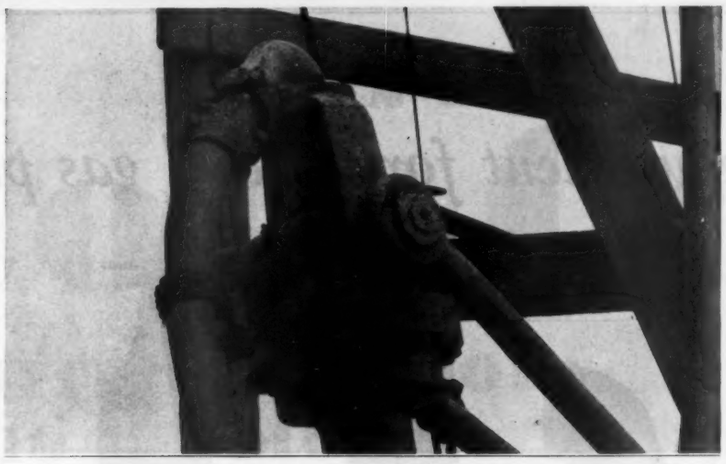

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Goodyear Rotary Hose has proved in actual service that it possesses the qualities which make for trouble-free operation at lowest ultimate cost.

It holds the pressures unfailingly, no matter how high they may be or how sudden the increase. Hour after hour, day in and day out, it withstands the terrific force with which the mud column is driven down the drill stem.

It is both strong and flexible. Reinforced at the ends with two extra plies that insure substantial support for the couplings, Goodyear Rotary Hose, because of its special construction, has the strength and also the flexibility to endure the twisting strain without flinching or giving way.

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Does your hose meet these tests—the tests of a good rotary hose? If not, you want Goodyear Rotary Hose, the hose that is built to meet the service required and to protect our good name.

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Crane equipment for oil and gas pipe lines

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One of a group of cast steel screwed fittings with long thread lengths. Tested at 800 pounds hydraulic pressure. This pattern is made for casting in steel and should not be compared with cast steel fittings made from ordinary cast iron patterns. See Catalogue 51, page 407.

No. 260-D

One of a group of cast steel fittings for oil vapor pressures up to 550 pounds, temperatures to 900°F., and cold oil, gas and water working pressures up to 2000 pounds. See Catalogue 51, page 407.

No. 754

Double disc gate valve, 700 pounds test. Discs are guided accurately in the body. Ferrosteel body and bonnet. Stems are of Crane stem metal, high grade manganese bronze of over 50,000 pounds tensile strength. Body rings are of Crane Steam Brass. See Circular 212.

No. 343-E

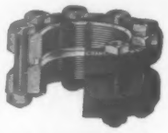
Double disc gate valve, ferrosteel 1000 pounds test. Discs are accurately guided in the body. Inside wedging mechanism is brass to iron. Accurate machining reduces friction in all sliding parts. Supplied with screwed or flanged ends, in outside screw and yoke or non-rising stem patterns. See Circular 212.

No. 215-H

Double disc gate valve, 1600 pound test, for oil, gas or water Ferrosteel body, bonnet and discs. Discs are guided accurately in the body. Screwed end valves are lipped for lead. Outside screw and yoke or non-rising stem patterns can be supplied. See page 14, Circular 212.

No. 266-E

Heavy pattern malleable iron cross fitting, made in ¼-inch to 16-inch sizes. Particularly adapted for exacting requirements of the oil industry. Long thread lengths and heavier bands than commercial fittings. For use on high pressure cold oil, gas and waterlines. See Catalogue 51, page 339.



No. 245-H

Heavy pattern malleable iron flange union for oil working pressures up to 800 pounds. For use on high pressure cold oil, gas and water lines. Ground-joint seat and exceptionally long threads. See Catalogue 51, page 339.

No. 247-H

Ferrosteel hydraulic flange union; tongue and groove. Good for cold oil, gas or water pressures up to 1000 pounds. Suitable sizes for all oil, gas and water purposes. Gasket is extra with this type. See Catalogue 51, page 340.

No. 831-E

All steel ground joint flange union for hot oil working pressures up to 600 pounds and temperatures to 750°F.; 400 pounds at 900°; cold water, oil or gas working pressure to 1200 pounds. Available in sizes from 4-inch to 12-inch inclusive. See Circular 212.

Cast steel distributing header

Manifold headers will be made to your order with any number of outlets, according to your special requirements. The fitting illustrated here is supplied in cast steel, ferrosteel, or cast iron, with either flanged or screwed ends. Write for details.

Learn more about these materials backed by 74 YEARS OF EXPERIENCE. Write for the Crane book on materials for field, pipe line, natural gas, and gasoline plants, Circular 212

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Barnsdall Oil Company	21
Barnsdall Refining Company	17
Beacon Oil Company	17
Belcher Oil Company	15
Brooks Oil Company	10
Buckeye Pipe Line Company	27
California Eastern Oil Company	12
California Petroleum Company	20
Caloric Company	11
Canfield Oil Company	27
Cincinnati Oil Works Company	13
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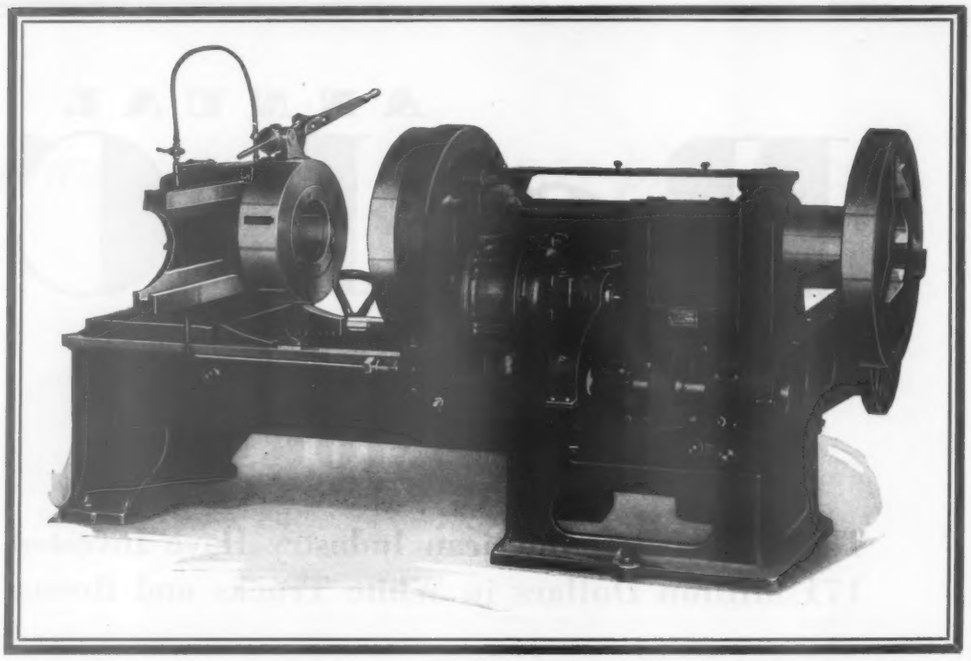
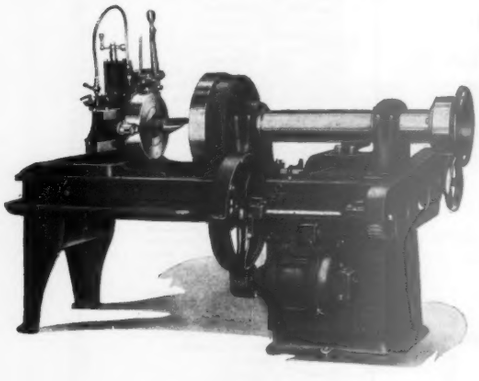
Winona Oil Company	15
Woco Pep Company	11
Wofford Oil Company	35
Z & M Oil Company	12



Bignall and Keeler Duplex Pipe Machine with individual, constant speed motor drive through gear box.

Fast, accurate threading —at low cost

Rear view of Peerless machine showing constant speed motor drive. All gears are shielded.



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B&K pipe machines are now made in seventeen types and sizes. Each machine has a wide range to meet oil field requirements. Ask for our latest catalog. It will help you select your equipment. Sent free of charge.

Bignall & Keeler Machine Works

of the N. O. Nelson Mfg. Co.

EDWARDSVILLE, ILLINOIS

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PEERLESS B&K DUPLEX P·D·Q·C

O&GJ 7-18 Gray

FORGED STEEL
affords your men protection

ANYBODY experienced with the conditions of high pressure fields knows the hazards of their working conditions. It behooves the operator to protect the lives of his men and control of well as far as possible.

This can be done best in the Gate Valves by using the new Darling Forged Steel Valve. It is the strongest valve that can be made, built for working pressures up to 3000 lbs. The very nature of forged steel eliminates the defects which may lie hidden until the unexpected emergency arises.

The Darling Forged Steel Valve is ideal for Well Control, Flow Lines, Pipe Lines and any other places of hazardous control.

Made in Screwed Ends, Flanged Ends and
Flanged Ends with Companion Flanges bolted on.

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DARLING
GATE VALVES

463

G-R Bentube Sections

The G-R Bentube Section is fully protected by U. S. Patent No. 1,617,083

MAINTAIN rated capacity even with poor quality cooling water because of the automatic scale-shedding feature which prevents scale from building up to a thickness which would reduce the cooling effect below that for which the sections are designed.

G-R Bentube Sections are standard and interchangeable, may be set up in stacks for flexible capacity, are built of Admiralty metal tubes and cast iron headers for long life, and have high salvage value because of the ease with which they may be dismantled, transported and re-erected as required by changes in plant layout.

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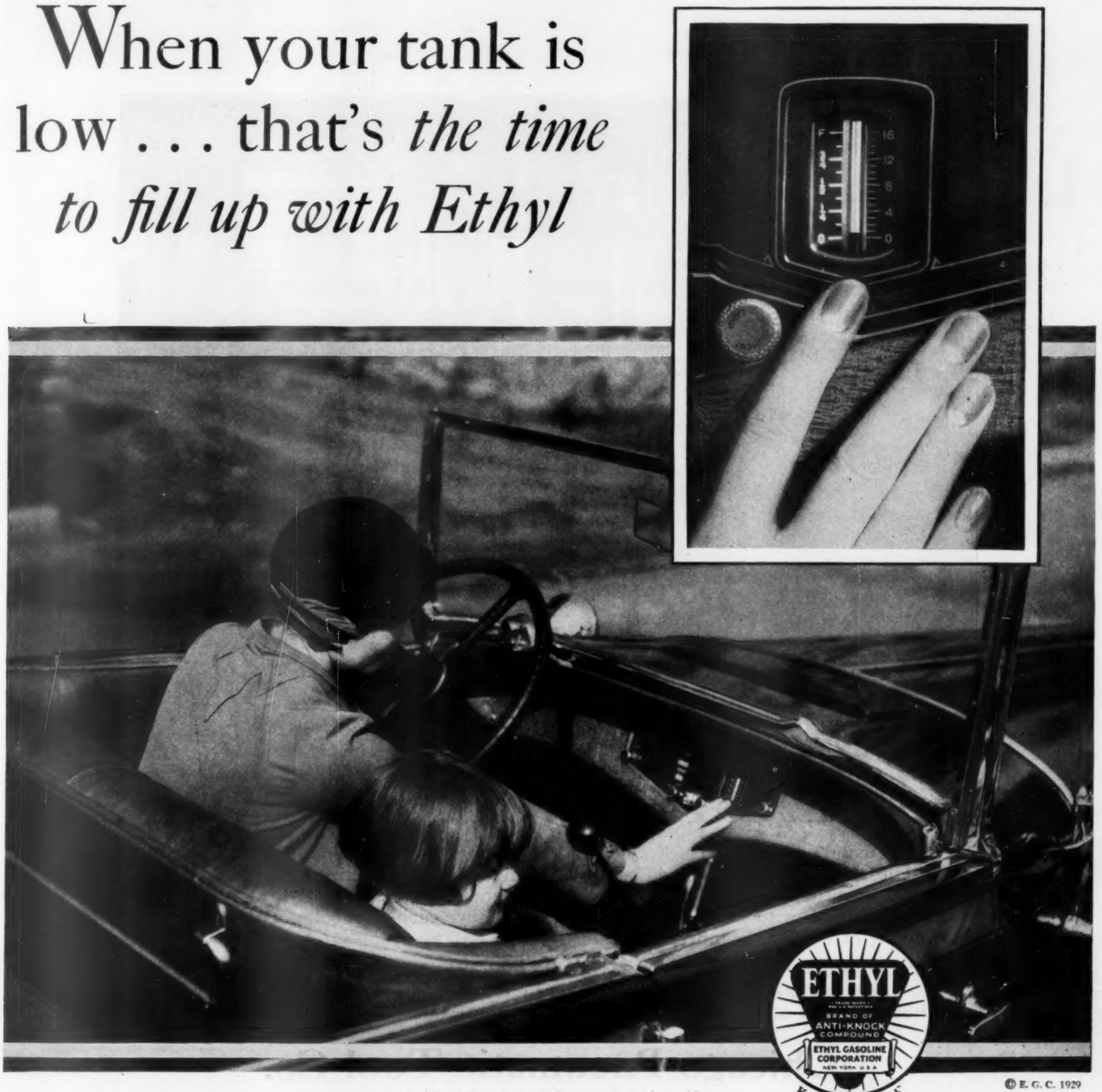
Griscom-Russell

Heat Transfer Apparatus

When your tank is low . . . that's *the time to fill up with Ethyl*



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THE GAUGE says the gasoline is getting low. Just the time to fill up with Ethyl. Ethyl should not be mixed with ordinary gasoline left in the tank. Naturally you cannot get the full benefits of this premium fuel if it is diluted with other gasoline.

Let Ethyl give new life to your car. Let it put to work the extra power that's in it.

Ethyl is gasoline *plus*. To good gasoline has been added Ethyl fluid containing tetraethyl lead. This is the anti-knock compound developed by automotive science to turn good gasoline into better gasoline.

Watch that gauge. When it gets down, ask for Ethyl. You will see the difference it makes in quicker pick-up, less gear shifting, greater comfort, pleasure and safety in motoring.

Start riding with Ethyl. You will find it on sale wherever you drive at pumps bearing the Ethyl emblem shown above.

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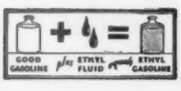

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A large installation of CP Gas Engine Driven Vertical Gas Compressors in the Seminole Field

ECONOMICAL
in SPACE—in OPERATION

FOR compressor service of all kinds this compact, self-contained, high capacity Diesel or gas engine driven compressor fills every requirement. A large variety of interchangeable cylinder sizes can be supplied, adapting it to widely varying conditions or to work of an experimental nature such as encountered with the flowing of wells by compressed gas.

CP Compressors of this type are available with a capacity range from 49 to 578 cu. ft. per minute and pressures from 60 to 1000 pounds per square inch. Fully illustrated and described in Bulletin 798 sent on request.

Chicago Pneumatic Tool Co.

6 East 44th Street, NEW YORK, N. Y.

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The "Fightingest" member of an illustrious truck tire family

The Goodrich Heavy Duty Oil Field Special. Comrade of the Goodrich Heavy Duty Silvertown Cord. Member, too, of the illustrious Goodrich Heavy Duty Silvertown Tire family.

5 SPECIAL ADVANTAGES OF OIL FIELD SPECIALS

1 Note the unusually strong carcass of *reinforced* construction.

2 Rows of "teeth" like the undershot jaw of a bull dog give *added* traction.

3 Top tread areas equal to assure traction and *even* wear on smooth roads.

4 *Twin* beads fit the tire snugly to rim and help resist "side-roll" wear.

5 The tire toughened *throughout* by the famous Goodrich "water cure."

HERE is the youngest member of the famous Goodrich Heavy Duty Silvertown family.

By right of birth it is heir to all Goodrich mileage traditions.

And by unsurpassed records of achievement it has *proved* its right to the Goodrich name.

A special tire for a special purpose . . . the Goodrich Heavy Duty Silvertown "Oil Field Special."

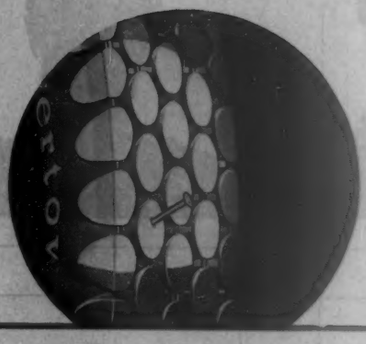
A tire that will *out-pull* and *out-last* any truck tire in the oil fields! Specify Goodrich Oil Field Specials on your next truck.

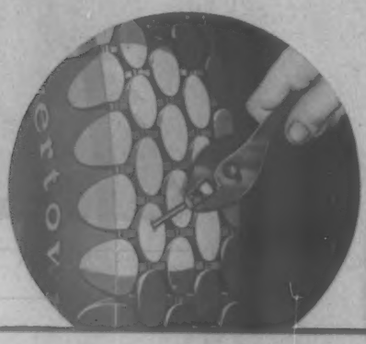
The B. F. Goodrich Rubber Company, Established 1870, Akron, Ohio — Pacific Goodrich Rubber Company, Los Angeles, Calif. — In Canada: Canadian Goodrich Company, Kitchener, Ontario.

SPECIFY GOODRICH ON YOUR NEXT TRUCK

and Now

GOODRICH ANNOUNCES
The Remarkable Air Container
to replace inner tubes

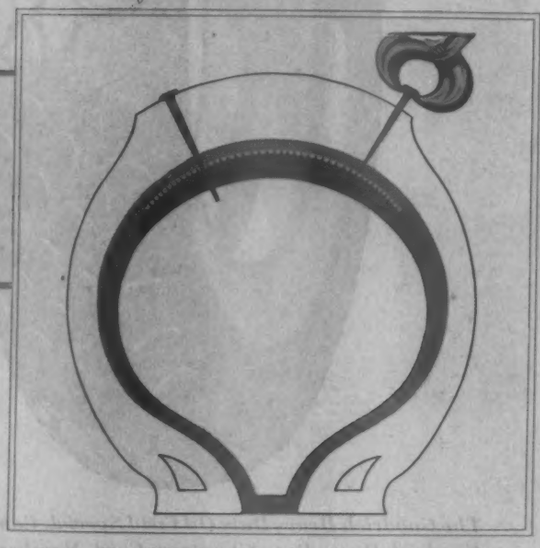




Seals Punctures!
Strengthens Tires!
Adds Mileage!

1 THAT'S BAD! *Looks like certain trouble here, as any truck operator knows from frequent experience. But this truck is riding on Air Containers! See what happens. . . .*

2 OUT IT COMES! *A pair of pliers pulls out the nail . . . and away goes the truck as if nothing had happened! No flat . . . no loss of air . . . and no slow leak! How can it be?*



3 HERE'S THE REASON WHY! *See that black area? That is a segment of soft rubber, under constant compression. The instant the nail pierced that segment, the soft rubber gripped it tightly, allowing no air to escape. As the nail was withdrawn, the rubber pressed in behind the point, sealing the hole perfectly, automatically, instantly. Not an ounce of pressure lost!*

THE Goodrich Air Container! A revolutionary new development that supplants the inner tube.

Sponsored, perfected and guaranteed by Goodrich . . . it is now available to those seeking safety and freedom from tire troubles.

Here's what the Air Container does:

It *seals* punctures on running wheels . . . users have picked up nails, tacks, screws, pieces of tire chain . . . and driven on them for miles without the loss of a pound of air!

It *maintains* air pressure. Users have gone for months . . . from July, 1927, to March, 1928, in one instance . . . without adding an ounce of air to their tires.

It *strengthens* the whole tire. One user traveled for two weeks after cutting the tire on a stone . . . yet no deflation resulted.

How It Works

The diagram to the right shows how the Air Container works. When a nail pierces the Air Container, the compressed soft rubber grips it tightly . . . allowing no air to escape. As the nail is removed, this compressed rubber instantly fills up the hole, before air can be lost.

In addition . . . the Air Container is considerably heavier than the ordinary inner tube. Its thicker walls take up the force of bruises and blows. They prevent serious damage to the casing.

See your nearest Goodrich dealer about the new Air Container. For it offers you new security, new peace of mind, new mileage, new economy . . . in fact, revolutionary new performance from your tires, whether on your personal cars or business trucks.

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Goodrich *Air Containers*

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The OIL and GAS JOURNAL

PRODUCING REFINING ENGINEERING MARKETING

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All Areas Help Add to Crude Output

Highest daily average estimated total production in 1928, week ended Dec. 29, 2,585,844 bbls. Lowest in 1928, May 19, 2,338,241 bbls.

Overproduction in California Being Felt More in Other Sections, Through Backing Up Mid-Continent Products

By Andrew M. Rowley

Highest daily average estimated light oil production in 1928, week ended Dec. 29, 2,158,134 bbls. Lowest in 1928, Mar. 3, 1,927,713 bbls.

Comparatively small increases in crude oil output in a majority of the producing areas of the country last week resulted in a sizable gain in total production. While California registered an increase of only 9,500 barrels daily, the enormous production in that State is constantly wielding a greater influence on the situation in other sections of the country.

In the Mid-Continent area, crude oil is still being withdrawn from storage but California crude and gasoline are affecting Mid-Continent conditions through backing up Mid-Continent products in the eastern part of the country and influencing the situation on the Gulf Coast. The crude oil market in California is reported as being weak with many operators believing a readjustment of the crude oil price schedule may be expected at almost any time. The big flush production permits producers in those areas to realize a profit, despite comparatively low prices, because of the large yield of the wells. Consequently, with the vast investment necessary to carry on operations in the deep sand pools, these operators feel they are entitled to develop their properties to the utmost and secure as much production as possible to enable them to realize on their investments.

Difficulty in obtaining sufficient tanker capacity has limited to some extent shipments of California products. Tanker rates on the Gulf Coast have advanced materially within the past few weeks indicating the California demand for shipping. Storage is becoming a big problem in California, also, but evidently this and limited shipping facilities have not bothered producers sufficiently to this time to affect production.

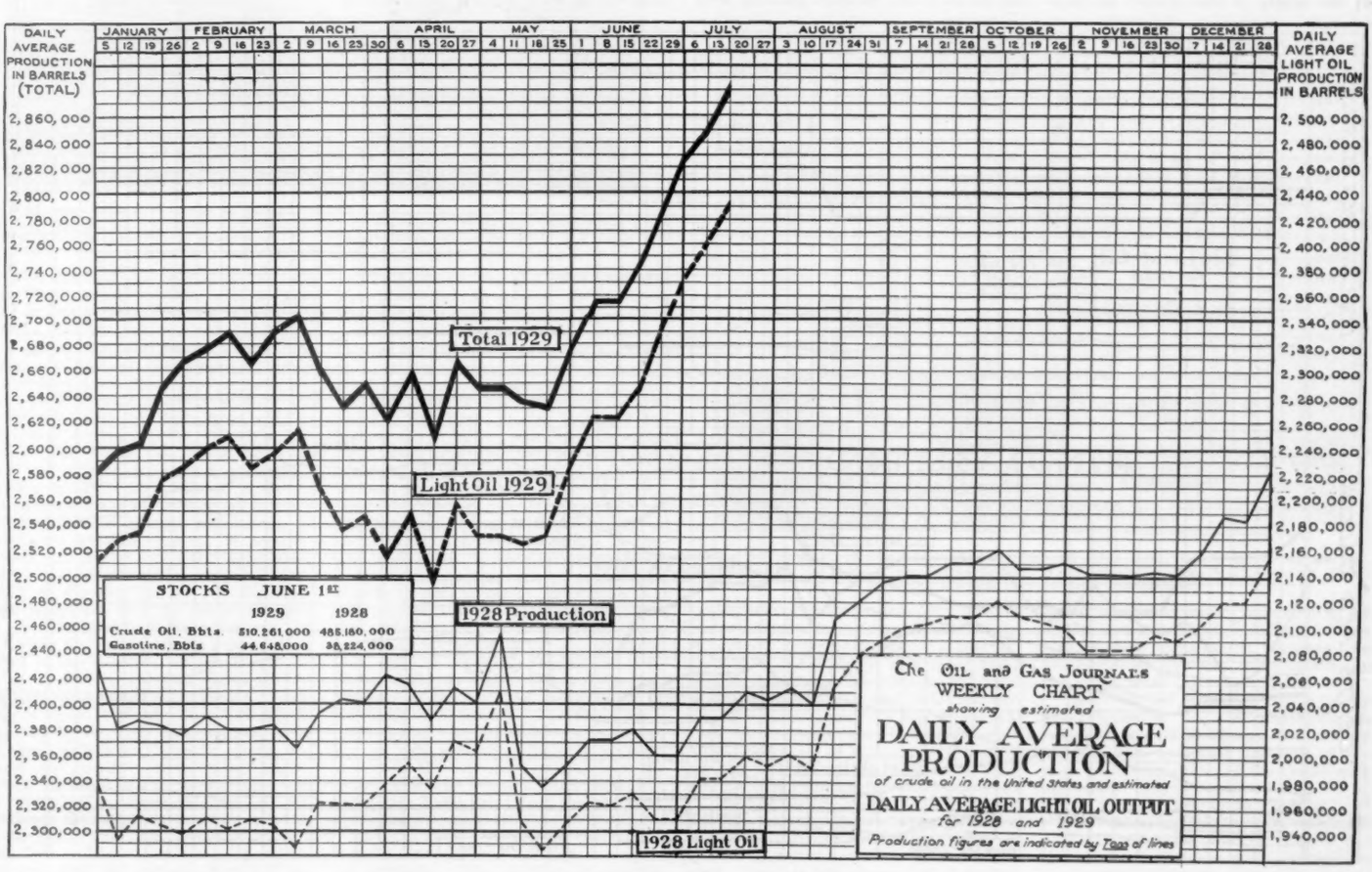
The crude price reduction in Pennsylvania on Tuesday of this week is not regarded as having any bearing whatever on conditions elsewhere in the country. The crude oil situation in the East is different than in other areas due to the credit balance arrangement and price changes there do not have the influence in other sections as they did a number of years ago.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended July 13, and a comparison with the previous week follows:

	July 13		July 6	
	Light	Heavy	Light	Heavy
Oklahoma—				
Oklahoma City	19,710	.....	17,295	.....
St.-Louis Pearson	76,260	.....	80,580	.....
Seminole	307,245	.....	308,920	.....
Northern Miscellaneous	261,670	.....	255,235	.....
Southern Fields	55,070	.....	55,120	.....
Total Oklahoma	719,955	.....	717,150	.....
West Texas—				
Hendricks	139,500	.....	140,300	.....
Yates	122,069	.....	117,550	.....
Remainder	119,740	.....	119,820	.....
Total West Texas	381,309	.....	377,670	.....
North Louisiana	29,550	6,120	29,095	5,960
Arkansas	21,530	47,640	21,670	47,580
North Central Texas	144,006	.....	142,078	.....
Texas Panhandle	85,870	.....	79,155	.....
East Central Texas	19,510	.....	19,142	.....
Kansas	121,215	.....	122,210	.....
Total Mid-Continent Area	1,522,945	53,760	1,508,170	53,540
Gulf Coast	.....	156,957	.....	151,887
Southwest Texas	.....	75,233	.....	76,189
Eastern	121,000	.....	119,000	.....
Rocky Mountain Area	74,912	.....	71,882	.....
California—				
Santa Fe Springs	285,000	.....	270,000	.....
Long Beach	171,000	.....	176,000	.....
Huntington Beach	42,000	.....	43,000	.....
Elwood	28,000	.....	29,000	.....
Inglewood	15,000	7,500	15,000	8,500
Ventura Avenue	59,000	.....	59,000	.....
Seal Beach	50,000	.....	50,000	.....
Remainder of State	63,500	159,000	60,000	160,000
Total California	713,500	166,500	702,000	168,500
Total United States	2,432,357	452,450	2,401,052	450,116
Grand Total		2,884,807		2,851,168

Total Increase, 33,639 Bbls.; Light Oil Increase, 31,305 Bbls.



Further Decline in Gasoline Prices

Large Oklahoma Refiners Again Reduce Quotations When Shipments Fail to Improve. Kerosene Lower. Other Products Unchanged

By C. O. Willson

The substantial reductions made in refinery gasoline prices in Oklahoma (Group 3) early last week failed to result in any marked improvement in the movement of all grades. The spot market the first of this week was as dull as it was before the price reductions were announced. Refiners who dispose of the bulk of their gasoline through their own stations reported an increased consumption. In several instances those with jobber contracts also reported an increase in shipments from their refineries. However there is still a disposition on the part of jobbers to pass up their contracts as much as possible and buy on the spot market.

The wide margins between the prices quoted on the spot market by the larger refiners in Oklahoma and the low prices obtainable from other sources still prevails. A week ago when the spot prices on 58-60 U. S. Motor gasoline was reduced from 9¼ to 8½ cents it was hoped that shipments from Oklahoma and other Mid-Continent refineries would improve with not more than one-half cent between the low and high of the market. This expectation did not materialize. Some U. S. Motor gasoline in Oklahoma sold under 8 cents immediately and in differential territory sales as low as 7½ cents basis Group 3 were reported. This situation became more acute on Tuesday when several large refiners reduced their price to 8 cents.

Among the remaining products, refiners who are pushing their kerosene sales on the spot market have been forced to reduce their price one-fourth cent. The demand for this product is not active but the supply is also limited so there has not been a serious break in prices as in the case of gasoline. The movement of fuel oil and gas oil is fair and the special grades which are in greatest demand are scarce in Oklahoma. There has been no change in prices. Bright stocks and steam refined cylinder stocks are still considered strong in Oklahoma with no change in petroleum wax, which is weak. Natural gasolines are following the trend of the refinery gasoline with prices from one-half to three-fourth cent under the market of last week. The movement of this product has not improved.

REFINED MARKET BAROMETER

Weakness in one or more products was reported from all the principal refinery centers east of the West Coast during the past week. On the West Coast the export and coastwise market is weak but domestic prices are steady. The greatest slump in the refinery tank car market centered in the Middle West and Mid-Continent where substantial price reductions became effective a week ago. The spot demand did not improve materially following the reductions and the first of this week prices were again lowered. Natural gasolines also slumped rapidly in price except for California where prices are unchanged. With the export demand inactive the domestic kerosene market is sluggish and prices were lowered when any changes were made. Fuel oil and gas oil prices unchanged. The reaction in the steam refined cylinder stocks and bright stocks continues in the Pennsylvania and the eastern market and the general reduction in Pennsylvania grade crude oil prices is expected to result in further price reductions.

Mid-Continent—Spot demand for gasoline slow and further price reductions in all grades become effective. Natural gasoline prices three-quarters cent to 1 cent lower than last week. Kerosene prices lower in all areas. Fuel oil and gas oil prices fairly firm. Lubricating oils and wax unchanged.

East Coast—Gasoline, kerosene and gas oil market unsettled and prices reflect downward trend. Further softness in cylinder stocks. Competition keen in gasoline sales. Prices reduced 2 cents on several grades of steam refined stock. No change in bunker fuel oil prices. High melting point wax shows further weakness.

Pennsylvania—Neutral oils dull. Cylinder stocks of all grades freely available. Fuel oil unchanged. Fair demand for gasoline.

Gulf Coast—Advance in tanker rates continues to be factor in market. No additional reductions in fuel oil prices as sellers prefer to await further developments.

Chicago—Gasoline buying on spot market weak and prices lower. Kerosene dull. More inquiries for fuel oil and gas oil. Bright stock market strong.

Large Buying Needed

In the gasoline market it is apparent that some substantial buying is needed if the market is to be stabilized around its present levels. The price reductions of a week ago instead of creating confidence in the market resulted in a near panic among some of the sellers who have made special inducements to sellers to move their accumulated stocks. The buyers, as usual in such cases, are staying out of the market as much as possible in expectation of further price reductions. A large purchase by an export or domestic buyer would absorb the distress material which is now controlling the market and bring other buyers into the market.

There are many observers who believe the unfavorable factors in the market have been overemphasized in the past week. It is pointed out that the next 60 days is the largest gasoline consuming period of the year. This is particularly true of the Middle West. These observers see no reason why prices cannot be stabilized and during this period at least held at levels which will permit some profit to refiners while they reduce their inventories.

Part of the gasoline market weakness is obviously due to the expectation that crude oil price schedules as posted by the major purchasers will be reduced. There is nothing to indicate that this expectation will be realized in the immediate future. Most students of the crude oil situation are not anticipating any change in the posted schedules of the Mid-Continent before September 1. Whether any change will be made at that time, it is said, will depend on developments in the crude oil situation. At present it is known that the larger refiners who buy from the major crude buyers have not reduced their purchases. In fact, in several cases, their July purchases will exceed those of June. Several of these companies are more concerned with the tank

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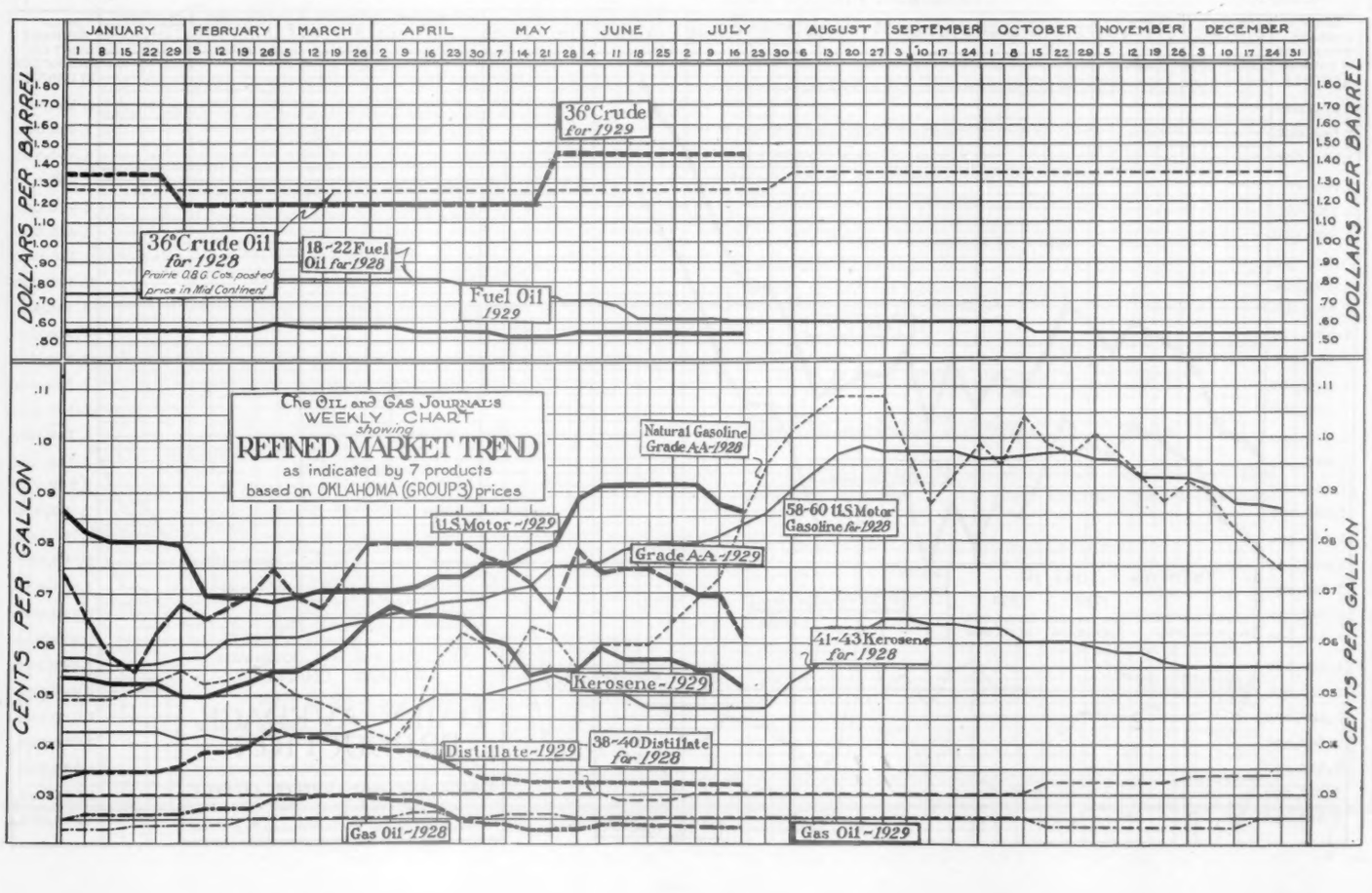


Gasoline Plants At Oklahoma City

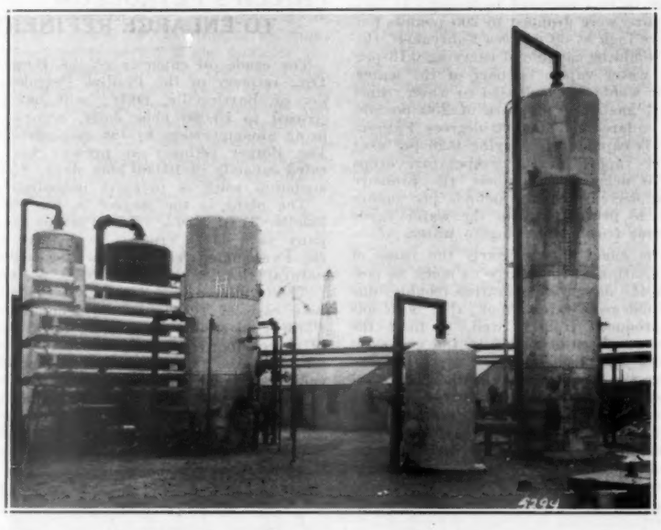
Two Companies Operating With a Third to Start Construction. Large Volume of Gas of Low Gasoline Content

By C. O. Willson

With two plants in operation and a third to start construction immediately the Oklahoma City Pool of Oklahoma is receiving the attention of the natural gasoline fraternity generally.

Manufacturers who have investigated the field take the position that it is too early to make any predictions regarding the probable future natural gasoline output of the pool. The latter is of course directly dependent on the extent of the field as a producer of crude oil and this is yet to be determined.

The field however is no longer a one-well and one-plant pool and preparations are being made to take care of the casing-head gas as it becomes available from the completed wells. The plants now operating belong to the Foster Petroleum Corp. and the Coline Gasoline Corp. The Sinclair Oil & Gas Co. has announced plans for the construction of a large plant of the oil absorption type.



First plant in the Oklahoma City Pool owned by the Foster Petroleum Corp. Plant has been operated for several months on gas obtained from discovery well. The plant is being enlarged with additional absorber capacity.

About all that can be said of the field from the natural gasoline end at this time is that a large volume of gas of relatively low gasoline content is obtainable from the completed wells. The daily gas flow of the completed wells varies from 4,500,000 cubic feet (part recycle gas) of the discovery well to the 60,000,000 cubic feet daily from what is commonly known as the "Sinclair gas well." The latter well along with the high gas volume is producing between 1,600 and 2,000 bbls. daily of crude oil with a gravity around 68 A.P.I.

Except for the Sinclair well the gas is showing a gasoline content of approximately one gallon per 1,000 cubic feet. This is a lean gas when compared with the 2 to 6-gallon gas of the Seminole Field which has been the center of activity for the gasoline manufacturers in Oklahoma for the past three years.

Due to the gasoline content it will be necessary for the plants to have oil absorption equipment if a large yield of gasoline is to be obtained. In the Seminole area due to the high gasoline content of the gas, satisfactory results were obtained in straight compression plants usually operated in conjunction with gas lift units. The discovery well of the Oklahoma City Field is using the gas lift but the other wells are dependent on natural flow. There are some operators who feel that the natural flow will be of short duration and this will mean that gasoline plants to a large extent will be dependent on recycle gas obtained in a gas lift operation. In this event it is doubtful if the field ever shows any large production of natural gasoline.

Coline Plant

The plant of the Coline Gasoline Corp. is located on the lease of the Coline Oil Co. from whose well the gas is obtained. Both companies are subsidiaries of the Coline Corporation which is owned by the Santa Fe Railroad.

The plant is a Southwestern No. 85 type. It incorporates the latest in design of Southwestern equipment. This type is designed for rapid construction and permanent operation with the maximum in portability. The plant is assembled at the Southwestern plant on steel skids with every accessory required for plant operation. At the plant site the connection between the plant units can be made quickly and when necessary the plant can be placed in operation within a few days.

The erection of the Coline plant was started before the first well of the lease was completed. Concrete foundations are used with other construction features looking to long-time operation of the plant. The first plant, including the cooling tower, boilers and pumping equipment, is so arranged that two other complete plants can be installed adjoining the one now in operation. This arrangement provides not only for expansion but also for the contraction of plant facilities should this later be necessary. A second plant is to be installed immediately.

At present time a back pressure of 85 pounds is maintained at the Coline well from which the gas is obtained. This well, which is known as the No. 1 Olds, has been averaging in excess of 5,000 bbls. daily of crude oil since it was completed early in July. With this back pressure at the well the gas pressure at the plant is 70 pounds. The plant has a rated capacity of 11,000,000 cubic feet of gas at this pressure. This is approximately equal to the gas available from the well. The gas tests a little over one gallon per 1,000 cubic feet, corrected for atmospheric conditions.

The gas from the well to the oil absorption tower passes through a tangential scrubber. This scrubber is designed to remove all entrained matter from the gas. Gas from the scrubber enters the bottom of a 6 by 38-foot oil absorber. The residue gas from the absorber passes through another tangential scrubber to remove any absorption oil from the gas. The residue gas at present is available for field fuel.

A liquid level control determines the flow of rich oil from the absorber as shown in the accompanying diagram.The oil first passes to a horizontal weathering tank to permit the removal of the occluded gases. These fixed gases are removed from the system through a back pressure control connected to the tank.

At the weathering tank the oil is picked up by a pump controlled by a fluid flow controller. This pump discharges through a pressure heat exchanger, a gravity heat exchanger and finally to a steam preheater. The heat exchangers of the closed type have 750 square feet of heating surface and the preheater 265 square feet. The oil is then discharged in the bottom of a combination evaporator and rectifying column.

Before designing the present unit Southwestern equipment had separate evaporators and rectifying towers. Control of the overhead gasoline stream was obtained through a closed coil in the top of the tower. This has been changed to provide for an open gasoline reflux at the top of the combination evaporator and rectifying column.

Automatic Control

The denuded oil in the bottom of the evaporator operates a liquid level control which in turn regulates the pump taking suction from evaporator. The denuded oil from the evaporator first flows by gravity through the gravity heat exchanger. The pump at that point takes suction and discharges through the pressure heat exchanger and then through oil coolers, returning to top of oil absorber completing the operating cycle. The combination of a liquid level control for the rich oil at the weathering tank and the same control for the denuded oil at the evaporator makes the entire absorption and distillation operation automatic.

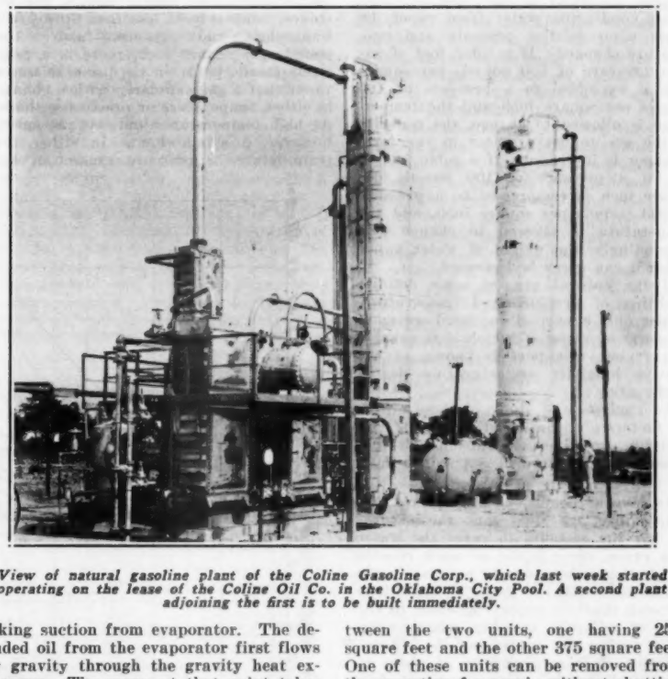
Two oil coolers connected in series are used. One has 500 square feet of cooling surface and the other 750 square feet. These are connected in series. The water cooling medium passes through the coolers in parallel. This arrangement allows one of the coolers to be cut out of the system without shutting down the plant.

From the evaporator the saturated gases pass directly to the rectifying column. As previously explained the specification of the finished gasoline stream is obtained by returning a part of the gasoline to the top of the tower in an open reflux.

This operation also is automatically controlled. The reflux pump which takes suction at this receiving tank is controlled automatically by the temperature at the top of the rectifying column. The remaining gasoline through a liquid level control passes to the gasoline storage tanks.

The plant has some special equipment which adds to the attractiveness of the operation. There are two dehydrators which operate between the evaporator and rectifying column. Any water accumulating in the bubble cap trays of the column through these dehydrators is automatically removed from the unit. Traps of the Armstrong type also are maintained at the evaporator, receiving tank and steam preheater.

Another interesting special feature is the use of the Ventura mist extractor. The gas from the column passes through this extractor before going to the water condensers. This extractor removes the water condensate from the gas. The two water condensers have a total capacity of 625 square feet. This is divided between the two units, one having 250 square feet and the other 375 square feet. One of these units can be removed from the operation for repair without shutting down the plant.



View of natural gasoline plant of the Coline Gasoline Corp., which last week started operating on the lease of the Coline Oil Co. in the Oklahoma City Pool. A second plant adjoining the first is to be built immediately.

E. D. Parker who had charge of the plant erection for the Southwestern company is now in charge of operation. He has been appointed manager of gasoline plant operations by the Coline management.

Foster Petroleum Plant

The first plant in the field which has been operating for several months was that of the Indian Territory Illuminating

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Problem of Water Vapor in Natural Gas

Value of Eliminating at the Source as Much as Possible Danger of Operation Troubles Due to Condensed Water Vapor

Specially Contributed

Dalton's law of partial pressures states that when two or more gases are present in a gaseous mixture of definite volume, the pressure of the gaseous mixture is equal to the sum of the pressures that would be exerted were each one present alone in the same volume. Thus, the pressure due to each gas in a mixture is directly proportional to the volume occupied by that particular gas. If the law is used in a mixture of natural gas and water vapor, therefore,

$$V_1P_2=V_2P_1$$

where V_1 is the partial volume for the water vapor,

V_2 is the volume of the mixture at P_2,

P_1 is the partial pressure for the water vapor,

P_2 is the pressure of the mixture.

The problem of water vapor in natural gas is dependent upon an understanding of several factors; saturation, pressure, temperature, dewpoint, carrying capacity, and relative humidity.

Natural gas is saturated with moisture when the partial pressure due to water vapor is the same as the vapor pressure of water at the temperature of the gas. The only effect of the natural gas itself is to impose upon the water vapor its temperature. A cubic foot of saturated natural gas at 500 pounds per square inch pressure contains the same amount of water vapor as a cubic foot at 100 pounds per square inch, provided that the temperature remains the same.

The temperature at which the natural gas becomes saturated is the "dewpoint"; if it is cooled, water will be formed.

Carrying Capacity

The carrying capacity of natural gas to take up water in the form of vapor or its condensing water from vapor depends upon relative pressure and temperature changes. If a cubic foot of gas at a pressure of 500 pounds per square inch is expanded to a pressure of 100 pounds per square inch and the temperature is allowed to change, the capacity of the gas to carry water in the form of vapor is increased. If a cubic foot of gas at a pressure of 100 pounds per square inch is compressed to a pressure of 500 pounds per square inch, and the temperature is allowed to change correspondingly, the weight of water vapor which it can carry is decreased.

If the natural gas, at some definite condition of pressure and temperature, carries only a part of the total water in the form of vapor of which it is capable of carrying, this part is known as the relative humidity or saturation degree of the gas.

An analysis and study of these different factors gives information that is valuable in problems of transmission and measurement of natural gas in the field.

Effects of Water

As long as conditions of pressure and temperature are such that the natural gas has the capacity to carry the water as a vapor, there is not so much trouble in actual operation, except possibly in the measurement of the gas. If conditions are such that the vapor condenses in the form of a liquid, freezing occurs, especially during the winter months. Accumulation of large quantities of water in the pipe lines also causes excessive drip blowing, and hence, gas waste. Actual tests have shown that a drip consisting of a 2-inch inlet from the pipe line, a water reservoir 8 inches in diameter and 10 feet long, and a 2-inch blowoff will cause a loss of about 3,000 cubic feet of gas in one minute when the line is blown off at a pressure of 250 pounds per square inch. If the drip is blown one minute each day for one year, over 1,000,000 cubic feet of gas is lost. Accumulation of water in the line, when not removed, causes operating troubles by decreasing the actual capacity of the line to transmit gas. Actual tests have shown that the capacity of a pipe line can be decreased due to the accumulation of water in the low places in the line.

When the gas is cooled below the dewpoint, the water vapor condenses to water. The dewpoint is dependent upon both pressure and temperature. Natural gas can carry less water at high pressures and low temperatures than at low pressures and high temperatures; under the latter condition, the gas will actually pick up water vapor.

Shown by Chart

These facts are illustrated clearly in the chart. In this chart, the ordinates represent the actual percentage of water vapor which the gas has the capacity to carry corresponding to the gauge pressure marked on each pressure curve, and to the temperature in degrees Fahrenheit representd on the abscissae. The maximum percentage of water vapor which can be carried by a gas at different temperatures and pressures was obtained by calculating the ratio of the vapor pressure of water at each temperature and the absolute pressure (assuming the barometric pressure to be 14.4 pounds per square inch) and expressing this ratio as a per cent. In other words,

Maximum percentage of water vapor=

$$\frac{\text{Vapor pressure of water}}{\text{Gauge pressure}+14.4}\times 100$$

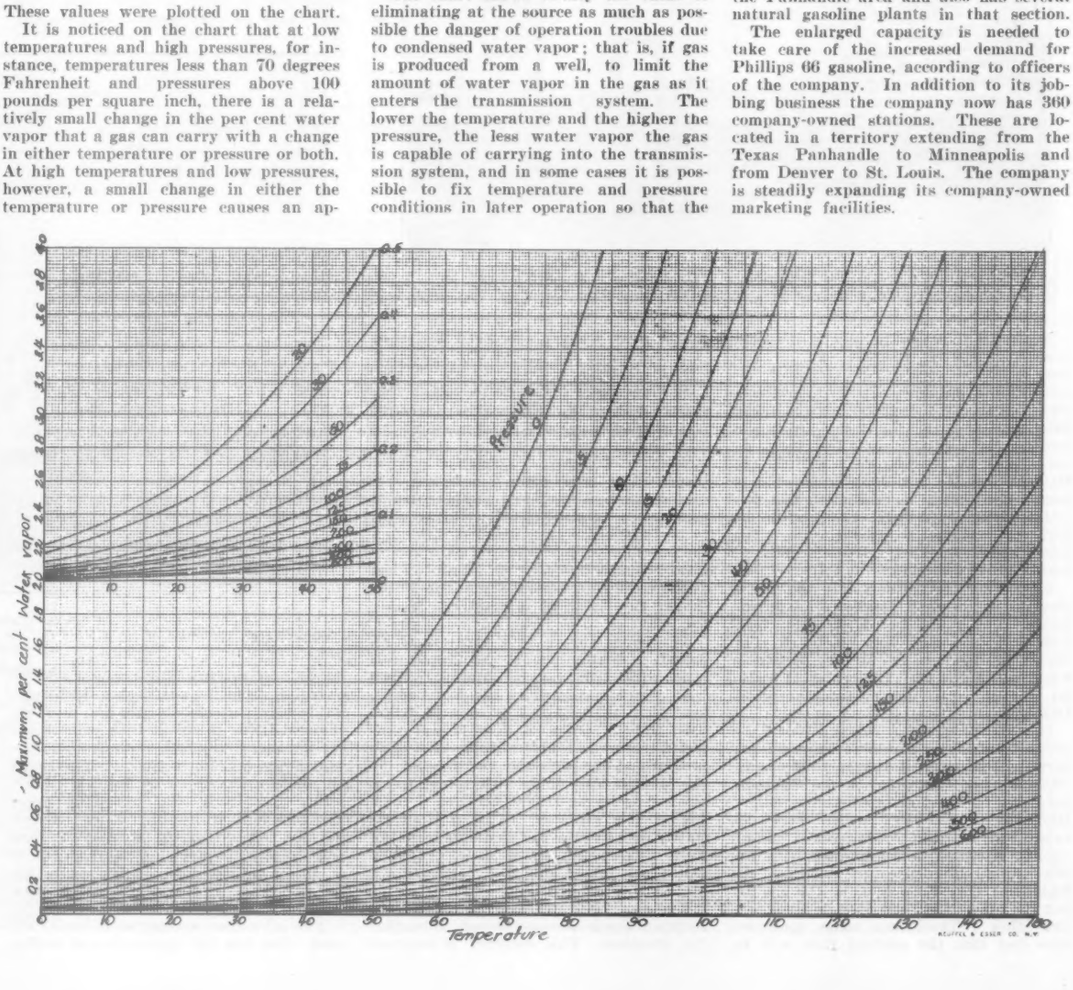
These values were plotted on the chart.

It is noticed on the chart that at low temperatures and high pressures, for instance, temperatures less than 70 degrees Fahrenheit and pressures above 100 pounds per square inch, there is a relatively small change in the per cent water vapor that a gas can carry with a change in either temperature or pressure or both. At high temperatures and low pressures, however, a small change in either the temperature or pressure causes an appreciable change in the per cent water vapor that a gas is capable of carrying. As either the temperature or pressure increases, the per cent water vapor a gas is capable of carrying increases, and this increase becomes more accelerated at the higher temperatures and pressures.

Transmission Through Lines

This chart gives some interesting information in transmission of gas through pipe lines. For instance, for a definite per cent of water vapor in a gas at some high pressure, it is possible to determine to what value the pressure on the gas must drop so that the water vapor does not condense to water when the temperature is reduced. For example, gas at a pressure of 400 pounds per square inch and a temperature of 140 degrees Fahrenheit is capable of carrying 0.56 per cent water vapor. If the temperature is reduced to 60 degrees Fahrenheit, the pressure will have to be dropped to 30 pounds per square inch in order for no water vapor to be condensed to water. If this pressure were dropped to 200 pounds per square inch at 60 degrees Fahrenheit, the gas would be capable of carrying 0.16 per cent water vapor, or part of the water vapor would be condensed to water. Similarly, gas at a pressure of 250 pounds per square inch and 90 degrees Fahrenheit is capable of carrying 0.26 per cent water vapor. If the temperature drops to 70 degrees Fahrenheit, the pressure must decrease to 125 pounds per square inch to prevent any of the water vapor present from condensing to water.

The chart shows clearly the value of eliminating at the source as much as possible the danger of operation troubles due to condensed water vapor; that is, if gas is produced from a well, to limit the amount of water vapor in the gas as it enters the transmission system. The lower the temperature and the higher the pressure, the less water vapor the gas is capable of carrying into the transmission system, and in some cases it is possible to fix temperature and pressure conditions in later operation so that the gas is actually capable of "picking up" more water rather than to condense the water vapor to water.



Managing Committee Directs Business of Chestnut & Smith

At a meeting of the board of directors of the Chestnut & Smith Corp. and affiliated companies in Tulsa on July 10, a management committee was authorized by the board and appointed by the president as follows: Thomas A. Chestnut, chairman, A. W. Leonard and R. C. Sharp.

This committee will direct the business of the Chestnut & Smith Corp. and its affiliated companies and has secured the services of M. F. Powers, who will act as general manager of all companies.

PHILLIPS PETROLEUM TO ENLARGE REFINERY

The crude oil capacity of the Borger, Tex., refinery of the Phillips Petroleum Co. of Bartlesville, Okla., will be increased to 15,000 bbls. daily, according to an announcement by the management. The Borger refinery at present has a rated capacity of 10,000 bbls. daily. Construction work is to start immediately.

The plant is the largest in the Panhandle, Tex., Field. The Phillips company is a large crude oil producer in the Panhandle area and also has several natural gasoline plants in that section.

The enlarged capacity is needed to take care of the increased demand for Phillips 66 gasoline, according to officers of the company. In addition to its jobbing business the company now has 360 company-owned stations. These are located in a territory extending from the Texas Panhandle to Minneapolis and from Denver to St. Louis. The company is steadily expanding its company-owned marketing facilities.

Utilization of Waste Natural Gas

Possibility of Converting This Product Into an Anti-knock Motor Fuel Is Engaging Attention of Scientists

By L. G. E. Bignell
Petroleum Engineering Editor

One of the most interesting developments in the utilization of natural gas that for one reason or another is not being used profitably today is the possibility of converting it into an anti-knock motor fuel. That this can be done at least in the laboratory, if not yet commercially, has been demonstrated by the petroleum experiment station of the Bureau of Mines at Bartlesville, Okla.

In a recent visit to the experiment station the writer discussed this possibility with H. M. Smith, who is in charge of the experimental work on this problem. Mr. Smith says:

"There has recently been much interest shown in the direct conversion of methane and higher hydrocarbon gases to benzol by means of heat. The first step is somewhat similar to the thermal decomposition to form carbon and hydrogen, but differs in the time of reaction. If the heating period of the methane gas at high temperatures is very brief, instead of producing only carbon and hydrogen a mixture of organic compounds and hydrogen is formed, with practically no free carbon. The chief products when methane is cracked are gaseous ethylene and acetylene, liquid benzol and toluol, and solid naphthalene and anthracene."

It should perhaps be explained that benzol and toluol are used largely to blend with commercial gasoline to reduce the tendency of the gasoline to detonate or knock and that for this purpose a considerable field is being developed. The unsaturated gases, ethylene and acetylene are used as basic materials for the manufacture of glycols, lacquer solvents, and other chemical products, while naphthalene and anthracene are valuable intermediates for the making of dyes and pigments.

Heat Breaks Down Methane

Mr. Smith went on to say: "The basic idea of this reaction is that the methane gas is broken down by heat. The methane molecule is assumed to split into such radicals as ($\equiv CH$), ($=CH_2$) and ($—CH_3$), which have never been isolated but are supposed to have a fugitive existence at the moment the gas is cracked. Under certain conditions of temperature and pressure these fugitive radicals must recombine to form other compounds such as acetylene, ethylene, benzol, toluol, etc."

The type of apparatus that is being used in the laboratory by Mr. Smith is shown in the accompanying sketch and the actual work of breaking down the gas is done in an electrically heated tube made of a mixture of aluminum and silicon oxides which has the properties of being able to withstand temperatures of between 1,000 and 1,200 degrees Centigrade without decomposing, and also, what is quite important, does not have any undesirable elements in its mixture that react unfavorably on the gas during its transition period.

This tube is about 24 inches long from end to end and five-sixteenths-inch inside diameter, but only a portion of it is within the furnace and of this heated portion only about 4 inches is actively brought into use. The gas will normally flow through this section very rapidly and the reaction is very quickly performed.

The benzol and toluol leave the reaction tube in the vapor state and are chilled in the laboratory process by the use of a pentane bath previously cooled to about —80 degrees Centigrade by liquid nitrogen which vaporizes at around —195 degrees Centigrade.

Pentane (C_5H_{12}) is used for this purpose because it will not solidify at this temperature (F.P. —130 degrees Centigrade) and is easily accessible. Other compounds such as solid carbon dioxide, CO_2, can be used to chill the benzol gas.

The principal solids, produced as a tar which is precipitated by the Cottrell process, are naphthalene, $C_{10}H_8$, the white material from which moth balls are made, and anthracene, $C_{14}H_{10}$, a product used in dyes.

Benzol and Tar

The experiments thus far have shown that there is evidently a fixed relation between the proportion of benzol and tar produced by the reactions, and when the rate of flow or the temperature at which the reactions take place are changed the amount of benzol will be varied proportionately.

If a 97 per cent methane gas is used for experimental work it has been noted that when the exit gases show by analysis below 60 per cent methane, the yield of products desired is low and carbon will usually be precipitated in the system clogging it so that the experiment must be stopped for cleaning of the apparatus.

The gases acetylene and ethylene are discharged in a mixed state and it is one of the problems of the process to separate them as they are usually accompanied by the other residue gases from the run.

Mr. Smith, in connection with his study of benzol production, has collected a large amount of previously published information on other uses of natural gas, which the writer has drawn on freely in preparing this article.

Alcohols

The romance of the chemistry of alcohol is so interwoven into the development of all industry that it is of great interest to anyone engaged in the petroleum industry because it is now touching elbows, as it were, with the oil industry in that considerable work has been and is still being done upon the manufacture of methanol or methyl alcohol by a synthetic process that uses methane gas for its starting point.

There are many different alcohols but the two most commonly known and used at this time are methyl alcohol, (methanol or wood alcohol) CH_3OH, and ethyl alcohol, C_2H_5OH. These compounds are characterized by the hydroxyl groups (—OH) and an alkyl group consisting of carbon and hydrogen, as for instance C_2H_5—.

These combinations of carbon, hydrogen and oxygen are many and varied and this particular series may include such compounds as butyl alcohol (C_4H_9OH) and amyl alcohol ($C_5H_{11}OH$), but for the purpose of this article the methyl alcohol alone will be considered although some work is being done trying to synthesize these higher types of alcohols from hydrocarbon gases.

Wood alcohol was first prepared by Boyle in 1661 by the destructive distillation of hard woods which yielded inflammable gases, a strong aqueous distillate, and a quantity of tar.

With the discovery of a means of making alcohol of this kind in quantity in connection with the manufacture of charcoal its uses were expanded and have spread to practically every industry and art.

Alcohols are principally used as solvents and it is the most used chemical except sulphuric acid and caustic. It is true that the industrial or ethyl alcohol is now more generally used than the wood alcohol because it can be prepared by the fermentation of many substances, such as sugar-cane molasses, corn, and in Germany they use potatoes, while in France alcohol is made out of sugar beets and in other countries sorghum is valuable as a source of this organic compound.

Some time prior to 1916 chemists found that if methane and steam were heated in a tube or retort in the absence of air there would be formed hydrogen and carbon monoxide; and these gases would recombine under the proper control of heat and pressure and a catalyst to form methyl alcohol.

Patents covering this process were granted to the Badische Analin Sodafabrik on August 23, 1916, and according to the description given in this patent the process consists of employing carbon monoxide and hydrogen either in the free form or in compounds such as methane, in the presence of catalysts such as the oxides of some other compounds of cesium, (Ce), chromium, (Cr), cobalt, (Co), manganese, (Mg), molybdenum, (Mo), osnium, (Os), palladium, (Pd), titanium, (Ti), zinc, (Zn), etc., at a pressure of 100-120 atmospheres (1,500 to 1,800 pounds) and a temperature of 360-420 degrees Centigrade (680 to 788 degrees Fahrenheit) and under these conditions liquid and gaseous hydrocarbons both saturated and unsaturated are formed as well as oxidized derivatives of the same, such as alcohols, ketones, aldehydes and acetic acid.

The story of the development of the catalyst is in itself one of much interest. The prevalent theory is that it acts as an accelerator, to the reaction that is already taking place, but very slowly, and that the catalyst merely speeds up the reaction.

This theory is not agreed to by all chemists but to attempt to enter into this discussion here would avail nothing in particular, but it is interesting to note that catalysis has played and will continue to play a very important part in the development of all synthetic products, and because of the possibilities presented, the work of the chemist in the laboratory is carried on with much patience, always with the hope that he will discover catalysis that will bring to him fame and fortune.

Problem of Dry Gas

At this time this natural gas is utilized principally for the production of natural or casinghead gasoline, and the residue from this process is called "dry gas," of which the major hydrocarbon constituent is methane, CH_4, with successively decreasing percentages of ethane, propane and butane.

Nitrogen, oxygen and helium, the percentage of which varies greatly with different localities, will not enter into any reactions considered in this article, as they will act only as a diluent.

The small percentage of oxygen can be removed when its presence is detrimental to the processing of the gas.

Inasmuch as many millions of cubic feet of this "dry gas" is going to waste daily, which, if utilized would add greatly to the income of the petroleum industry, the problem is one of importance and immediate interest.

At the present time the principal uses for natural gas are as a fuel and as a source of carbon black. Its importance and use as a fuel is so well known that no discussion is necessary, but its utilization in the carbon black industry is of interest. In 1927 there were approximately 200,000,000 pounds of carbon black produced, which required the processing of about 150,000,000,000 cubic feet of natural gas. This represents an average of 1.4 pounds of carbon black per 1,000 cubic feet of gas. The wastefulness of this process is apparent when it is realized that 1,000 cubic feet of methane contain approximately 33 pounds of carbon, so that the average commercial yield of carbon black is only about 5 per cent, based on a pure methane gas. Since there are generally small percentages of heavy gases present, the actual yield is probably below 5 per cent of the theoretical.

This low yield would not be so inef-

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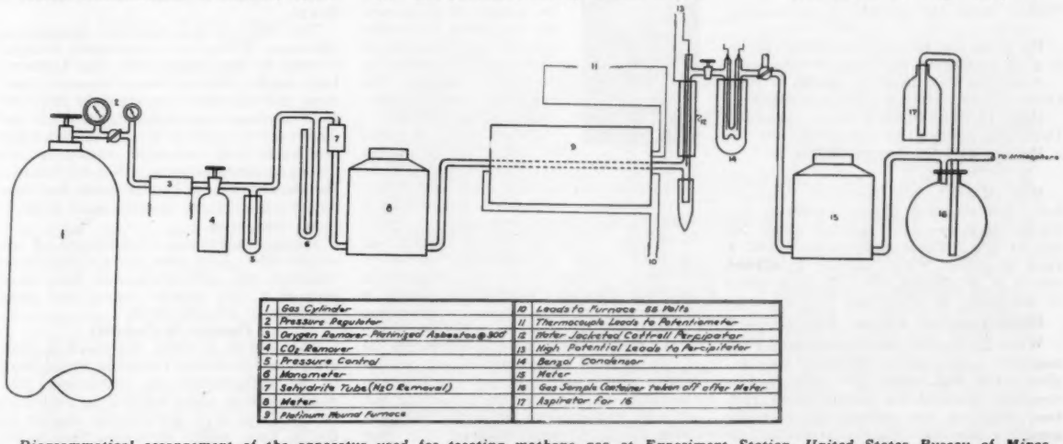

1	Gas Cylinder	10	Leads to Furnace 88 Volts
2	Pressure Regulator	11	Thermocouple Leads to Potentiometer
3	Oxygen Remover Platinized Asbestos @ 300°	12	Water Jacketed Cottrell Precipitator
4	CO_2 Remover	13	High Potential Leads to Precipitator
5	Pressure Control	14	Benzol Condenser
6	Manometer	15	Meter
7	Dehydrite Tube (H_2O Removal)	16	Gas Sample Container taken off after Meter
8	Meter	17	Aspirator For 16
9	Platinum Wound Furnace		

Diagrammatical arrangement of the apparatus used for treating methane gas at Experiment Station, United States Bureau of Mines, Bartlesville, Okla.

Oil Field Poet Knows Life in the Raw

Rattlesnakes, Starvation and Thirst Were Will Ferrell's Companions When He Hunted Gold Before Becoming an Oil Dispatcher

The throaty exhaust of gas engines, the bulky ugliness of boilers, bullwheels and calfwheels, and the whine of shackle rods or sand reels would not be termed sources of poetic inspiration by most rhymesters. Yet there is a kindly man of philosophic bent and poetic imagination who has captured romance in the industry that wrests crude oil from the earth's depths and he is known as "The Poet of the Oil Fields."

Will Ferrell has placed his thoughts on paper and given them voice over the radio. Almost everyone has heard him or knows of him through his writings.

If you have ever visited an old oil field, this excerpt from one of Mr. Ferrell's poems will stir memories:

"There's a shack beside the pipe line
On the old Dinwiddy lease,
Where the air is rank with sulphur
And the soil is full of grease;
Where the only strains of music
One may hear at eventide
Are the shackle rods a-whining
As they glide—and glide—and glide."

In a poem entitled "Outlaw," Mr. Ferrell thus vividly describes a "wild" gas well:

"I read in the paper the other day
Of the 'outlaw' gasser at Chickasha;
How the bit gnawed through to the drums of hell
And punctured the top of an age-old shell.
And up through the vent which the drill had bored
To the dark domain where the stuff was stored,
It came like a shot from an aircraft gun,
Hissing its wrath at the rising sun."

Oil Processes Told in Verse

Another of Mr. Ferrell's poems analyzes petroleum products from the time of their formation, outlining the various geological strata, and continuing on to the finished articles which are necessities today. Two extracts follows:

"Oil is the seepage from earth's decay,
Downward through strata of shale and clay,
Filtered through sands and the sieves of lime
To vats that were laid with the birth of time.
Hemmed by the bounds of its narrow cell;
Topped with a crust like a tortoise shell.
Bottled and corked, as the ages pass,
It throws off a vapor that's know as Gas."

"Thus, from the gloom of an ancient cave;
Up from the muck of its lowly grave,
A king is freed by the hand of man—
A captive king from the chains of Pan
Offal of earth that was once despised,
Back to its own as a thing disguised,
Powerful, sinister, sparkling clean,
Hail to His Majesty, Gasoline."

Will Ferrell was born in Fortville, Ind., and attended public schools in Indiana, Missouri and Kansas until the age of 15, following which he spent a year in college, then entering a railroad school in St. Louis where he specialized in the study of telegraphy.

Eight Years as Boomer Telegrapher

When he was 19 Mr. Ferrell began the nomadic career of a "boomer" telegrapher. For eight years he followed this vocation, working for nearly every railroad west of the Mississippi and for some in Mexico. During this time he traveled from the snow-capped peaks of Colorado to the cactus-covered land of tortillas and frijoles far to the south.

In the early years of his experience as a railroad telegrapher Mr. Ferrell was assigned to isolated stations in the sagebrush of Wyoming, where almost the only sounds heard were coyotes with the occasional shriek of a train whistling through a distant cut. It was a rough and unsettled section, devoid of refined social diversions.

Mr. Ferrell has watched with interest the improvements which inventions have wrought in telegraphy, from the time of the now obsolete one-way line and its sounder equipped with a tin tobacco box to serve as a resonator, to present lines carrying many messages simultaneously in either direction, and to the automatic printer—without mentioning wireless and radio. When he began railroading typewriters were not in general use and reports were made with a pen—which accounts, he believes, for the fact that a great many more persons were good penmen then. Although he himself has kept abreast of the rapidly changing times, Mr. Ferrell says that as improvements have occurred in railroad telegraphy much of its fascination and romance have faded, a fact lamented by other knights of the key who "pounded the brass" in the old days.

Prospected for Gold and Silver

In the early part of this century Mr. Ferrell became a prospector for gold and silver in the Mohave desert, wandering over the trails formerly roamed by Geronimo, exploring ancient and in some instances half-buried Indian villages—deserted erstwhile habitations of the Aztecs, and examining the ruins of forts found en route.

At that time and place the net yield of gold was about four ounces to each ton of ore, gold bringing $20 per ounce. A shaft was sunk 86 feet through solid rock by Mr. Ferrell's party, which operation required nine months. But this and other methods of extracting and separting ore were very crude, and transportation facilities virtually nil, it being 75 miles by burro to the nearest branch of a railroad, and thence more than 100 miles on the main line to the most convenient market, at El Paso.

During this period Mr. Ferrell and his companions endured many hardships and privations. Luckily, rabbits were plentiful and these furnished their chief source of food. But water was scarce, the nearest stream being 150 miles distant. On

Will Ferrell, "The Poet of the Oil Fields"

the old cattle ranch where they established headquarters was a water well operated by a windmill. But since they could depend upon having water only when the wind blew, this proved an unsatisfactory arrangement—especially in the desert country where water is always at a premium and therefore carefully husbanded.

Caught in Sand Storm with "Shorty"

Mr. Ferrell relates the thrilling details of an excursion made by himself and "Shorty," an associate, when they journeyed 15 miles by burro to a mythical "mountain" where it was thought gold could be found. Upon closer inspection the "rich mountain" proved to be nothing more than a rocky mound containing only iron and other baser ores.

"Naturally," said Mr. Ferrell, "we were disappointed. But our troubles had just begun. On the return trip a terrific sand storm overtook us and we were marooned five days with only the scant shelter afforded by a small rise in the ground. Our water supply had dwindled rapidly, as it can only on the desert, and we gave the remainder to our burros, knowing that without the animals we would likely be unable to reach the ranch.

"Finally I left Shorty, who was almost exhausted, and went in search of water. I walked miles against the driving wind which greatly retarded my progress, but at length I heard a creaking windmill, groped my way along the fence, then to the well where I filled my hat with water and started the return trip.

"Before leaving Shorty, it had been agreed that he was to fire his revolver at intervals, in that manner giving me his location. Without some such assistance it would have been impossible to find one's way in the storm. I walked on and on, but the howling wind was all I could hear. After what seemed like ages, but in reality was only a few hours, from far to one side came the dull report of a pistol. I turned in that direction, the following shots sounding nearer and nearer, and I eventually reached Shorty.

"Both of us were nearly dead from fatigue and thirst, but the water braced us up and, aided by the sound of the creaking windmill as we neared the ranch, we made our way back to safety."

Rattlesnakes and Starvation

Rattlesnakes, starvation and lack of water were perils constantly faced by the prospectors who, unable to find the main vein of gold thought to exist in that country and not having facilities properly to extract or transport the valuable ore they did find, at length abandoned their seemingly hopeless quest.

Mr. Ferrell then went to Oklahoma, from where he followed the oil fields to Kansas and back again, working on leases and pump stations, and eventually marrying in Oklahoma. He later became a gas dispatcher, and now resides in Tulsa where for the past eight years he has been oil dispatcher for one of the leading oil companies in the Mid-Continent field.

Ever since he can remember Mr. Ferrell has been composing verse. As a lad in school even he found it easy to transform his thoughts into rhymes. This faculty has grown with the passing of time. For more than 20 years Mr. Ferrell has been contributing poems to various magazines and oil trade journals, and in 1919 he published a book of verse.

In the course of his writing Mr. Ferrell created the mythical characters, "Driller Bill" and "Toolie Jim." This hardy, good-natured pair—comrades in the quest for oil—appear in many of his poems and prose stories.

Will Ferrell enjoys his work. He thinks nothing of sitting down at his typewriter and composing several poems in a single evening. In fact, he says, "I don't understand why anyone couldn't write poetry."

Mr. Ferrell devotes spare moments to the creation of new poems; that is, when he is not proudly watching the progress of his only child, Virginia Grace, 14 years old and a high school student, who already displays talent for verse and prose.

WASHINGTON NOW REALIZES COMPACT PROGRAM FAR FROM PRACTICABLE

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 15.—Since the meeting of representatives of the oil industry at Colorado Springs early in June the trend of opinion among oil producers has not been favorable toward the formation of interstate compacts as the best means for bringing about conservation of petroleum.

The consensus of views of these oil producers so far as they have drifted into Washington has been decidedly adverse. Briefly the reasons expressed against such compacts are based upon the difficulty of bringing them about. Congressional approval would be absolutely necessary and that is looked upon as a suggestion that will involve a long debate likely to require several years before an agreement for such compacts can be made.

The fact is the subject of interstate oil compacts received no prominent consideration until they were injected into the discussion on conservation as a way out of the unfortunate situation brought about by the Attorney General. At that time rapid progress was being made in focusing the attention of the industry upon practical methods for unit development and production in compliance with admonitions they had received from President Coolidge's Federal Oil Conservation Board.

The letter of the Attorney General to Secretary Wilbur for the moment brought a close to the efforts that the industry had made. Since then, however, and after the extended hearing held at Colorado Springs sentiment in the oil industry as it appears in this city is coming back with favorable views to the plan previously adopted. No one believes the Department of Justice could find any reasonable criticism for that plan to justify adverse action.

While expressions of approval of oil conservation have been made among both senators and representatives they have been of a very general nature and none has been in definite form.

Dangers in Compact

The opinion is freely expressed in Congress that interstate compacts would have to be safeguarded by provisions that would provide some controlling authority in the form of a government agency to decide upon many questions that might

(Continued on Page 150)

Most Phenomenal Well in the World

Detailed Description of Drilling and Equipment Used in Reagan County's Deep Producer. Contrast With Drake Well

By L. E. Bredberg

FORT WORTH, Tex., July 15.—One of the most phenomenal wells, if not the most phenomenal, of the world, has been written up in many magazines and papers, and continues to fill columns in newspapers every week due to the fact that it is ever gaining in production of both oil and gas, and setting new production peaks almost every week, sometimes running up as high as four new peaks in a period of seven days.

This well is Group No. 1 (Texon Oil & Land Co.'s) No. 1-B University, located 2,728 feet from the north line and 250 feet from the west line of Section 36, Block 9, University Survey, almost in the center of the Big Lake Field, Reagan County, Texas. It was spudded on February 8, 1926, and was intended to test the formations below the Big Lake pay, but on April 18, 1926, it was completed in the shallow pay, flowing 370 bbls. of 38.0 gravity oil per day, with 100,000 feet of gas at a total depth of 2,466 feet, with the pay at this depth, anhydrite. At 2,590 feet, 10-inch, 40-pound steel lap weld pipe with 8 threads was set.

Top of Lime

Top of the lime was encountered at 2,780 feet, a minus datum of 46 feet. Below this, at 2,825 feet in dolomite, 8¼-inch casing, 32-pound steel, lap weld with 8 threads, was set, and at 2,900 feet gas was struck at a minus datum of 166 feet. Oil showed up at 2,910 feet. A rather nasty fishing job cut down the drilling time at 3,020 feet, between November 23, 1926, and March 3, 1929, but 1,065 bbls. were produced from the Texon pay while the fishing job was carried on.

Then 5⅞-inch casing was set at 4,228 feet. This was 17-pound casing of lap weld with 11½ threads. Another oil showing was struck at 4,600 feet, a minus datum of 1,866 feet, and still another showing from 4,761-66 feet. A Clark drilling engine was used from May 17 to 26, 1927, drilling to 5,345 feet. It was at this depth that Carl Cromwell, superintendent of the Texon Oil Land Co., said. "Drill her another mile." But a tremendous gas pressure with an oil flow prevented this saying from being carried out. The rig burned on May 26. Another derrick was soon erected, and drilling resumed with steam. Another show of oil and gas, the third pay, was encountered at 6,277 feet in sand.

—Courtesy Oil Well Supply Co.

Derrick over Big Lake Oil Co.'s No. 2-C University in contrast to others.

on a plus datum of 268 feet. (Note—Datum, or sea level, is 2,734 feet.) Top of the first salt was struck at 1,110 feet with a plus datum of 1,624 feet; the second salt was encountered at 1,728 feet with a datum plus of 1,006 feet. And the third salt was struck at 2,080 feet with a datum plus of 654 feet.

From this pay horizon the well produced 32,152 bbls. up to October 15, 1926, when notice of intention to deepen was given. It was drilled with steam to 2,469 feet, then gas was used from this depth to 2,570 feet, where heaving sand below the shallow pay, probably a loosely cemented sandstone, which slacks on being exposed, and probably under compression is forced or runs into the open hole, causing much trouble in the well. Gas in this zone also gave considerable trouble.

From 2,570 feet to 2,855 feet steam was again used. The formation here went from sandy dolomite and red shale into

At 6,555 feet the well was shut down and equipped with twenty-five 65-horsepower electric motors (3 phase) Westinghouse with controls and Medart countershaft, which is a 4-inch grease packed roller bearing. The motors were hooked up in tandem, and the drilling belt was a Goodyear Thor oil field special 14 feet by 111 feet 6 ply.

Through this period the 5⅞-inch casing was pulled from 4,228 feet, the 6⅝-inch casing was ripped and cemented to shut off water and oil from 2,970 to 3,050 feet, and then cemented. This was cemented three times before it held. More 5⅞-inch steel casing was set to 6,176 feet, this being 20-pound seamless. Two new 7-8 by 4,500 Hazard drilling lines were put on at 6,175 feet, and another was put on at 7,705 feet. At 7,740 feet there was an oil stained shale. At 7,955 feet tools and a fishing string were lost in the hole, but this was only a four day job. A new 3-4 by 10,000 black drilling line and new half-inch 10,000 black sand line was put on here. One of the motors burned out at 8,062 feet when the hardest lime yet encountered made drilling excessively slow.

Rig Again Burned

On April 29, 1928, the rig again burned. A concrete foundation was built, and another 3-4 by 10,000 R. L. plow steel black wire was put on. When the rig burned the bailer went to the bottom of the hole, and caused a fishing job. At 8,343 feet a 7-8 by 11,000 black drilling line was put on.

E. M. Hawtof for the American Petroleum Institute, made a temperature test, finding the following degrees at different depths:

	Temperature Test
5720 feet	122 degrees Fahrenheit
6,500 feet	135 degrees Fahrenheit
7,000 feet	143 degrees Fahrenheit
7,500 feet	152 degrees Fahrenheit
8,000 feet	161 degrees Fahrenheit
8,500 feet	170 degrees Fahrenheit

Top of another gas sand was struck at 8,482 feet, and the top of the big pay was encountered at 8,523 feet, going into this pay two feet the well was shut down on December 4, 1928, flowing steadily after it had flowed 66 bbls. of oil on the first, and gauged 1,040,000 feet of gas. On December 4 it gauged 7,000,000 feet of gas and 402 bbls. of oil, gravity of the first oil testing 52.8. For several days after it started producing from this last pay, the gravity changed, until it reached 59.5, producing this gravity all the time since the first few days. A test of the gasoline content was run and it was found to contain 55.7 per cent gasoline, and the gasoline content in the gas coming from the separator was 1.8 gallons per 1,000 feet.

Took 1,030 Days

Three hundred ninety-four days were consumed in drilling this well, with 160 days used for fishing and drilling by tools in the hole. Fifty-six days were used in reaming, and 17 days taken to rebuild rigs. Added to this were 30 days used in rigging up and 10 days running casing, with 4 days taken to cement casing, and 24 days for pulling casing. Waiting on cement to set consumed 10 days, and drilling cement used up 18 more days. Cleaning out, bailing and swabbing called for 42 days, and repairing wasted 20, with 85 days used in a number of ways. These all total 870 days of working time. But still another 160 days of suspended time raised the total to 1,030 days used in completing the well.

Casing Record

15½-inch	769 feet
12½-inch	1,820 feet
10-inch	2,590 feet
8¼-inch	3,825 feet
6⅝-inch	3,080 feet
5 3-16 inch	6,176 feet

Water

First water sand	300 feet
Second water sand	548 feet
Third water sand	720 feet
Fourth water sand	825 feet
Fifth water sand	3,020 feet
Sixth water sand	3,410 feet

Labor cost was placed at $51,040,86, or $6 a foot, with a miscellaneous amount of $90,459.68 or $10.60 a foot, making the total cost of drilling the well $141,-500.54 or $16.60 a foot.

The production was handled with two oil and gas separators.

Making New Peaks

The depth of this well, and the fact that it is producing from such great depth

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—Courtesy The Kendall Studio, Titusville, Pa.

The Drake well near Titusville, Pa.

Mississippi Now Attracting Attention

Preliminary Geological and Geophysical Work Leads to Selection of Localities for Future Development

By D. H. Bancroft

SHREVEPORT, La., July 15.—While records available show that drilling for oil and gas in Mississippi has been going on intermittently since 1911, the State is just now attracting more attention than ever. This activity, prompted by the discovery of gas at Amory in 1926, has passed through the promotion stage in the course of which several wells were completed as dusters and salt water wells and many more abandoned through lack of finances, and advanced to much blocking of acreage, some drilling by major companies and, at the immediate present, to a thorough study of geological and other subsurface conditions by various types of geophysical instruments. Quite a formidable list of major companies appears interested in the State as a prospective source for new supplies of oil and gas in the future.

The Amory well was followed in 1928 by another gas well in the same area drilled by the Natural Gas & Fuel Corp. but which later was deepened and is carried at this time as a drilling well. The Amory well was completed October 5, 1927, at 2,472 feet, gauging 4,552,860 feet of gas and supplied the town of Amory in the vicinity of which there are six wells drilling at this time.

The preliminary geological and geophysical work that has been done since then appears to have led companies and individuals to choose the vicinity of Meridian, Amory and Jackson-Vicksburg as the most likely localities; at least that is where most of the geophysical work is going on just now. Lion Oil Refining Corp. recently completed a well in the Jackson area and there is drilling in Yalobusha County another well, which is attracting close attention. Behind the wells mentioned is a list, dated May 7, 1927, showing 100 wells drilled or "drilling" since 1911 and there are probably 50 more on the list carried by some of the interests active in the State in one way or another at present.

Included in the list of those who are active in one way or another or have acreage or are aiding in some way in blocking and drilling are the Sun Oil Co., Pure Oil Co., Lion Oil Refining Co., Shell Petroleum Corp., Ohio Oil Co., Gulf Refining Co., Moody-Seagraves, Palmer Corp., The Texas Company, Atlantic Oil Producing Co., Standard Oil Co. of Louisiana, Transcontinental Oil Co., Amerada Petroleum Corp., Carter Oil Co., Douglas Oil Co., and others. Some of these are maintaining one or more geologists in the field and have had them there for two or three years or more. Recently Gulf Refining Co. established field headquarters in Meridian with a staff of five geologists and paleontologists whence an elaborate program of core drilling on the Hatchetigbee anticline in southwestern Alabama and on the Jackson structure in Mississippi will be directed.

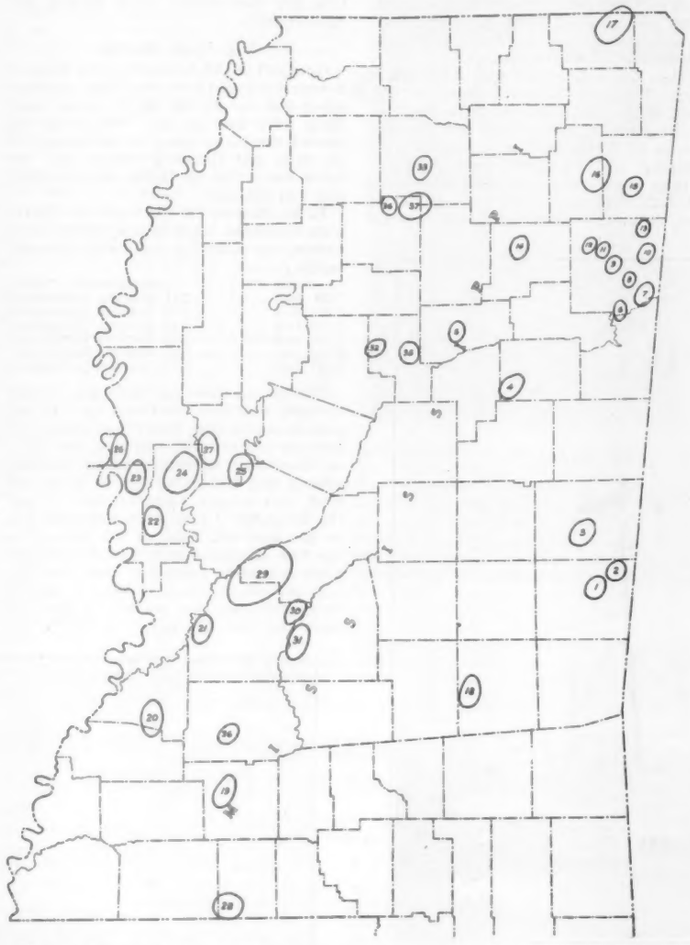
Activities in Mississippi and Alabama up to that time, with a discussion of drilling conditions, were described in an article in The Oil and Gas Journal of January 27, 1927, the log of the Amory well being published about the same time, and it is the purpose of this article to bring out what information is available from drilling experience since then.

Drilling Widely Scattered

Because what drilling has been done has been so widely scattered over the entire State it has been impossible for geologists to work out a type log such as Easton's type log of North Louisiana, etc. Geological conditions vary rather abruptly over the north half of Mississippi and Alabama so that the section of formations differs greatly and no type log could apply except to a few surrounding counties. However, a great deal of information of a general sort was obtained by the party of 40 or more geologists who joined the Shreveport Geological Society's recent field trip through northern Mississippi, northwestern Alabama and southwestern Tennessee, particularly those from Tulsa, Dallas, Houston, Fort Worth and other Mid-Continent headquarters who have not been so "hot" on Mississippi, as the Shreveport society has grown to be lately.

The outcrops of the various formations lie somewhat in a crescent form around the southwest end of the Cincinnati arch and the point stressed by at least one authority is that these outcrops now occupy almost exactly what was their original shore lines. In regions where there has been much erosion, as in Pennsylvania and other Appalachian states, the outcrops now exposed are representative of the true deep water deposits and a study of them as to their makeup and thickness would give a true type section. But the shore line outcrops of Mississippi and Alabama would not give much clue to the thickness and nature of the formations farther to the south and west where the beds were laid down in deeper water.

This is the first great difficulty in determining ahead of drilling just what formations to expect. But these very outcrops along the actual shore line vary greatly from place to place. For example, the Selma chalk is a solid bed having a measured thickness of 930 feet along the Alabama-Mississippi state line, but it thins down approaching the Tennessee state line to less than 300 feet and is replaced on top by the McNary sand member, on the bottom by the Coffee sand member, and farther north across the Tennessee line the chalk portion itself becomes a clay known as the Selma clay. The Ripley formation, corresponding to the Nacatoch of Louisiana, has a thickness of about 400 feet as it overlies the Selma on the Tennessee line, thins to nothing before reaching the Alabama line, and from central Chickasaw County to its southernmost exposure in Noxubee County it forms a tongue in the Selma with a thin portion of the Selma overlying it.



No. 1 Baker and Atkins 30,000 acres, central Lauderdale County. No. 2 F. X. Gowans 30,000 acres, northeastern Lauderdale County. No. 3 W. W. Jones 30,000 acres, south central Kemper County. No. 4 A. R. Reynolds 25,000 acres, southwest Oktipdeha County. No. 5 Barney Bays and others 15,000 acres, central Webster County. No. 6 The Texas Company 40,000 acres, south central Monroe County. No. 7 Natural Gas & Fuel Corp. (Arkansas Natural Gas Corp.) 30,000 acres, near Rye, Monroe County. No. 8 Brummett & De Montront 8,000 acres, at Lavackie, Monroe County. No. 9 A. N. Sutton 12,000 acres, at Acker, Monroe County. No. 10 Amory Petroleum Co., Quincy, Monroe County.

No. 11 Amory Developing Co., 2,500 Amory, Monroe County. No. 12 Makk Oil Co. 10,000 acres, near Wren, Monroe County. No. 13 Park Bowser and others 7,000 acres near Southville, Monroe County. No. 14 Hightower and Golson 4,500 acres, north of Houston, Chickasaw County. No. 15 Gillsby and Burns 18,000 acres, in central Itawamba County. No. 16 Moody and Seagraves 70,000 acres, east of Tupelo, Lee County. No. 17 Alcorn Petroleum Co., 20,000 acres, around Corinth, Alcorn County. No. 18 Paulett & King 17,000 acres, around Bay Springs, Jasper County. No. 19 Wynters and others 18,000 acres, west of Bookhaven, Lincoln County.

No. 20 Ben White and others 7,000 acres, in south central Claiborne County. No. 21 Young & Willis 1,500 acres, near Edwards, Hines County. No. 22 Atlantic Oil Producing Co., and The Texas Company 40,000 acres, near Blanton, Sharkey County. No. 23 O'Brien Brothers and Moody and Seagraves 30,000 acres, around Mayersville, Issaqueena County. No. 24 Atlantic Oil Producing Co., and The Texas Company 30,000 acres, near Rolling Cork, Sharkey County. No. 25 W. T. Mack 20,000 acres, in the corner of Yazoo and Humphries Counties. No. 26 Atlantic Oil Producing Co. and The Texas Company 30,000 acres, in the southwest corner of Washington County. No. 27 Byrd and Steele 20,000 acres, in the corner of Humphries and Sharkey Counties. No. 28 ownership unidentified 20,000 acres, corner of Pike and Amite Counties, near Osaka. No. 29 Homer P. Lee 40,000 acres, corner of Hines and Madison Counties.

No. 30 Mrs. Reeder and others 3,000 acres, north of Jackson, Hines County. No. 31 Love and Keaton 60,000 acres, south of Jackson, Hines County. No. 32 ownership and extent of acreage unidentified, near Winona, Montgomery County. No. 33 Goodson and Van Horn acreage undetermined, central Lafayette County. No. 34 Smith and others 22,000 acres, in southwestern Lauderdale County. No. 35 J. A. Pitcock 30,000 acres, northeastern Montgomery County. No. 36 Bill Rowe 18,000 acres, centering between Brown's wells and Clancey Copiah County. Nos. 37 and 38 Philp Brothers 60,000 acres, northeastern Yalobusha County. No. 39 Henderson and others 10,000 acres, north central Warren County, near El Dorado.

Great Variations

The Selma and the Ripley are the two top members of the upper Cretaceous. The Midway, next above the Ripley and constituting the bottom member of the Eocene, also has a great variation in its general makeup; the Porters Creek clay member continues all the way from Alabama across Mississippi into Tennessee but from Chickasaw County north to the Tennessee line it has a basal portion, Clayton, of hard yellowish limestones overlain by glauconitic marls and sand. This Clayton limestone produces a rough hilly topography across Tippah County and portions of Union.

The Wilcox, overlying the Midway varies in makeup even more than the others from Alabama across Mississippi and West Tennessee. From highly fossiliferous conditions in Alabama, the Wilcox becomes mostly loose sand in West Tennessee. Its middle member, the Holly Springs sand, consisting of cross-bedded sands and clay lenses ranging in thickness from about 150 feet on the Alabama line to some 600 feet on the Tennessee line, is the chief one. The basal member, Ackerman formation, consists of from 300 to 550 feet of lignitic clays and beds of lignite, most of which are sands, and in places the lignite beds are of good quality and considerable thickness. Above the Holly Springs member there is a great variation. In Alabama and across Lauderdale County, Mississippi, the top member of the Wilcox is the Hatchetigbee and Bashi (Woods Bluff) formations lignitic clays, lignite sand and glauconitic calcareous sandy marl. From Lauderdale County northward there is no Wilcox overlying the Holly Springs sand member but from central Montgomery County into Tennessee the Grenada formation is the top member. The Grenada consists of lignitic clays and sandy clays having a thickness of 150 to 200 feet.

These are the chief formations to be considered in any drilling in the north half of Mississippi as key bed formations for correlation purposes and include the first prospective pay zone, the Ripley.

Going deeper in the column below the Selma chalk, the outcrops show sand, clays, lignite and gravel, all of a steam

(Continued on Page 149)

Installation of Southwestern Gas Coolers by a major oil company at Maude, Okla.

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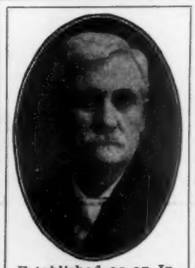

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A POLICY THAT WILL PAY

What is there in conservation for the individual producer and refiner?

Conservation has been discussed as a national necessity and as a check against overproduction, but what has it to offer to those who think only of themselves?

They may not believe it at first, but it can be proved that conservation is a policy that will pay, not only the nation and the industry, but the individual producer and refiner.

It will mean that the producer will get more for his oil and will probably get twice as much oil out of the ground, while the refiner will benefit and the consumer will not have to pay more for his gasoline.

This may sound like eating your cake and having it, but the economic solution is simple.

Today the industry is throwing away about half its cake. When it stops that waste these other results will be possible.

Fuel oil is down to 50 or 60 cents a barrel in Oklahoma, which is representative of the Mid-Continent, with lower prices in West Texas, which has to reflect a freight rate handicap.

That price is out of line with the present price of crude and has been for the greater part of two years. In all parts of the country fuel oil is being sold below its value in competition with coal as a fuel and far below its intrinsic value as raw material in the manufacture of gasoline in the cracking installations.

In any equitable and well rounded conservation program the price received for fuel oil and gas oil would be largely determined by their value in the manufacture of gasoline and not as a competitor of cheap coal.

Its use as fuel would be confined to utilizations which could afford to pay more than its competitive coal price, due to its greater value, aside from its B.t.u. value, in its convenience in handling, cleanliness and consumption only when actually needed.

The industry has been dumping it for two years without any regard to this value and even below its value in competition with coal, degrading it to competition on a price basis with only the cheapest kind of coal.

Yet fuel oil as charging stock in a cracking unit is rapidly reaching the point where it is worth as much as a barrel of the better grades of crude oil.

Overproduction of crude has thrown everything out of kelter. Besides the degradation of fuel oil the gasoline market is being demoralized at the height of the consuming season.

Residual and heavy oils have been a drag on the market for the past year and a half. Practically half of each barrel has been almost given away. All the burden has been put on about 50 per cent of the barrel.

On the other hand operations based on securing a maximum return upon each product, fuel oil being valued as charging stock or as a preferential fuel, would enable refiners to stabilize their production at actual values.

The enhancement of fuel oil would in return benefit the producer who is directly affected by cheap fuel oil as a competitor of crude, just as overproduction of crude cheapens fuel oil.

In fact in a well-rounded operation where each product brought the maximum return it would be possible to have $3 crude with the refiner furnishing gasoline to the consumer at very little increase over the present retail price.

But it should be kept constantly in mind that increasing the quantity or quality of market products from raw material will only increase the value of that raw material when the supply is kept under control.

Simply increasing the yield of products will otherwise result only in bringing down the price of those products overproduced.

Overproduction which produces wide fluctuations effectually prevents any attempt at stabilizing operations on a just return for each product. It becomes a scramble for gasoline gallonage with the rest dumped for whatever it may bring, virtually throwing away half of each barrel and demoralizing the market for all products, and the crude as well.

That is one illustration of how conservation would pay everybody, but there is another phase just as glaring.

Overproduction and cheapness mean sharper competition, increased sales expenses, overexpansion of marketing overhead and consequent loss that could and should be avoided.

When we had $3 oil it was a sellers' market. Buyers knew it was useless to shop around seeking bargain prices. There was no need for intensive sales campaigns and expensive expansion of marketing facilities. These increased costs are part of the price the industry is paying for overproduction which could be avoided by conservation keeping production in line with consumption.

These unnecessary costs could be avoided, enhancing the returns to producers and refiners alike, without increasing the cost to the ultimate consumer.

Conservation will thus pay the individual unit in the industry in two ways.

First, by ensuring a maximum return on each product of a barrel of crude and second by saving the expense of wasteful competitive overhead required when overproduction brings cheapened products and increased selling expense at the same time.

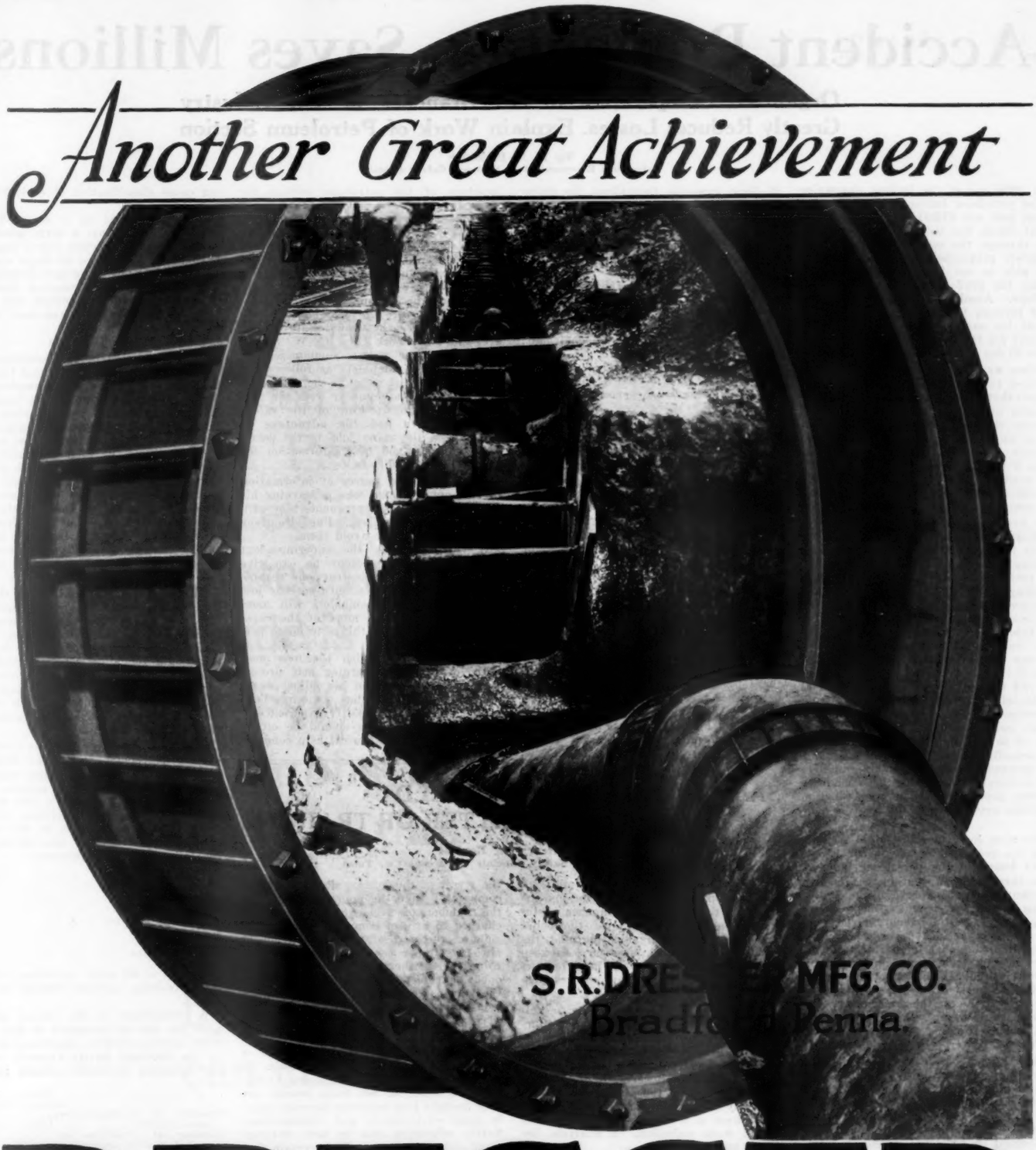
So long as conservation is deferred and existing conditions continue, the oil man is wasting his irreplaceable assets and squandering his money on uneconomic operations.

Conservation, wholly apart from its necessity as a national policy and as a palliative in periods of overproduction, has a definite money value as a permanent practice for every individual operator and refiner in the industry.

Arguments for conservation based on the national welfare and the benefit of the industry as a whole may leave many cold, but it can and should be shown that it means money in the pocket of the individual as well.

That sort of practical demonstration should convince the most hesitant that conservation is not a mere theory or an ideal, but the most hard-headed common sense that can be figured up and realized in dollars and cents.

Another Great Achievement



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Accident Prevention Saves Millions

Organized Co-operation in All Branches of Oil Industry Greatly Reduces Losses. Explain Work of Petroleum Section

By H. N. Blakeslee
Petroleum Representative, National Safety Council

In 1920 one of the leading companies in the petroleum industry of the United States paid out $18.01 for industrial accident claims for each pay roll employe. But through the study and application of safety principles, this same company was able to cut its industrial accident claims for 1927 to $7.82 per pay roll employe. Another large petroleum company through the same means was able to cut its cost of $15.75 per pay roll employe for industrial accidents for 1926 to $8.30 for 1927.

When we consider that the experience of these two companies is far more favorable than the average, because of active accident prevention work, and when we consider that some companies are spending as much as $40 annually per pay roll employe for industrial accidents claims costs, it is safe to assume that the average accident cost per pay roll employe throughout the industry is at least $15 per year.

It has been estimated that there are 1,500,000 employes in the petroleum industry in the United States, and by multiplying this number of people by $15 we find that the industry is actually spending $22,500,000 annually for industrial accident claims. This does not take into consideration the losses incident to the injuries not included in the claims cost; such as damage to property, loss of time of sympathetic employes at the time of the accident, stoppage of machinery and equipment, etc. This additional incidental cost has been conservatively estimated at four times that of the claims cost. Accordingly, it is reasonable to believe that industrial accidents are actually costing the petroleum industry upwards of $100,000,000 annually; and although progress has been made in accident prevention and in the reduction of claims costs, there is much to be done yet.

The most important organized step toward the reduction of the enormous accident losses in the petroleum industry came through an appeal by the leading petroleum safety engineers of the United States to the American Petroleum Institute. They asked for help in the solution of their accident prevention problems. Realizing that industrial accidents were costing the petroleum industry millions of dollars annually and believing that the cost of such accidents could be greatly reduced, the American Petroleum Institute began seeking for the most feasible plan to assist the petroleum companies.

The National Safety Council had formed a petroleum section in 1922, and most of the leading petroleum companies of the United States were members of this petroleum section. Because of the years of experience of the National Safety Council in accident prevention work, and because an accident prevention section had already been established for the petroleum industry, the American Petroleum Institute decided that they could give the petroleum industry the greatest possible assistance through the providing of funds for more extensive specialized work by the National Safety Council. Accordingly, in May of 1927, a full-time experienced petroleum safety engineer was employed by the National Safety Council, his activities to be financed by the American Petroleum Institute.

The man selected to fill this position had had about 15 years of experience in petroleum operations, including seven years of personal and accident prevention work. In order to familiarize himself thoroughly with accident prevention problems, this petroleum representative devoted several months to the study of these problems throughout the petroleum industry of the nation.

At the meeting of the petroleum section of the Annual Safety Congress, in September, 1927, at Chicago, an engineering committee was appointed to assist the petroleum representative of the National Safety Council in the development of a group of petroleum section safe practice pamphlets. This committee was composed of C. W. Smith, safety director, Standard Oil Co. of Indiana, chairman; R. E. Donovan, Standard Oil Co. of California; C. L. Hightower, safety director, Texas Pacific Coal & Oil Co., and F. L. Newcomb, supervising engineer, Standard Oil Co. of New Jersey.

Issue Pamphlets

During 1928 this group produced the following four petroleum section safe practice pamphlets:

Safe Practices in Pulling Wells.

Safety in Gasoline Service Station Operation.

Safe Practices in Loading Tank Cars (Gasoline.)

Safe Practices in Handling and Laying Pipe.

The thousands of copies of these pamphlets that the petroleum companies have obtained from the National Safety Council indicate that the petroleum companies are not only interested in the information contained in the pamphlets, but are eager for it. Comments by the petroleum trade press throughout the United States about these petroleum section pamphlets have been exceedingly complimentary.

In the preparation of these petroleum pamphlets, a first draft was prepared and mimeographed copies were sent to all members of the petroleum section for their review and comment. These first draft copies were returned to the petroleum representative with the comments of the members. He then redrafted the pamphlets into their final form, guided by the comments and suggestions received, to conform with the best practices throughout the nation.

Speaking before the petroleum section of the Seventeenth Annual Safety Congress in New York City, C. W. Smith, chairman of the section, summarized the value of these pamphlets as follows:

1. They are of value to the safety engineer who is not familiar with the particular operations. Few of the safety engineers have had the advantage of working on the many jobs in the petroleum industry and lack information for the details of such jobs.

2. They are a source of information for the new foreman who is learning his job as foreman. They provide him with specific information regarding situations to avoid and how to avoid them.

3. They provide the superintendent with information whereby he can give his foreman specific instructions regarding accident prevention on a specific job.

4. Reading the pamphlets will more definitely clarify the mind of the experienced worker as to things to do to prevent accidents.

5. They will furnish the new man with information regarding self protection, and protection of his fellow workers that in the past has sometime been gained only through costly experience.

6. The information should be of interest and value to clerical help conducting cause classification of accidents and statistical work.

Mr. Smith goes on to say: "We believe, of course, that a large percentage of the petroleum section safety engineers have broad knowledge on these subjects. However, but few of us have it readily at hand, summed up in concrete form and handled in such a simplified way as to be suitable to hand to the man on the job."

Six Divisions

At the meeting of the petroleum section at the Seventeenth Annual Congress in New York, plans were completed for dividing the section into the following six divisions: Atlantic, Great Lakes, Mid-Continent, Gulf, Rocky Mountain and Pacific. A chairman was elected to head up the section in each geographic section. A part of the duty of each division chairman is to produce two issues of the petroleum section news letter annually, thus providing for an issue of the news letter each month. This plan has been in operation since October, and has resulted in the production of excellent news letters full of live accident prevention information.

The engineering committee of the section was increased to seven members, a chairman and an engineering committeeman in each of the geographic divisions. Each member of this committee is gathering data for a petroleum section safe practice pamphlet, and the committee expects to produce at least six new pamphlets during 1929, dealing with the accident prevention problems of various petroleum operations.

The first safety contest was conducted by the petroleum section in 1928. It began February 1, 1928, and continued through a period of six months. Entries were made by units, a unit being a subsidiary company, a division or a refinery. For the purpose of the contest the petroleum industry was divided into the following seven divisions:

		No. units entered
1.	Manufacturing	20
2.	Marketing	13
3.	Producing	21
4.	Natural gasoline	13
5.	Pipe line	12
6.	Marine	5
7.	Construction	6

A total of 98 units, involving over 80,000 petroleum workers, entered the contest.

A comparison of the contest records, with the annual summary of the petroleum section accident experience as kept by the National Safety Council, reveals the following favorable contest results:

	1927 summary	1928 contest
Number of employes to each fatality	1,554	2,046
Number of employes to each lost time accident	12.84	15.17
Number of lost time accidents to each fatality	121	134.9

It will be noted that each comparison shows an improvement in the contest experienced over the 1927 annual summary.

Petroleum Section Contest

The 1929 petroleum section contest started on January 1, to run for a period of six months. A total of 125 units, involving over 150,000 petroleum workers, entered this second contest. Because of the large number of entries and the great number of workers involved, and because of the interest in the 1928 contest there is assurance that this 1929 contest will develop real live interest and keen competition.

On Wednesday, October 3, 1928, at the Seventeenth Annual Safety Congress, C. J. Hicks, executive assistant to the

(Continued on Page 168)

SAFETY IN PRODUCING FIELD MOSTLY MATTER OF TRAINING

By Henry W. Boggess
Superintendent of Safety, Sinclair Oil & Gas Co., Tulsa

The subject assigned to me would lead one to think that such organizations differ from those in other branches of industrial activities. I am of the belief that the kind of organization and the method of procedure necessary to keep it alive is much the same in a producing field as it is in any other industrial work.

There may be one reason why organizations in producing fields cannot function as they do in refineries or other places where work is centered at one point. Obviously, that reason is the scattered operation. However, in these modern times, when the automobile is as generally used and roads are superior to what were a few years ago, even this thread worn objection, on analysis, becomes unsound.

At the outset, let us say that all safety activities may be well grouped under two general headings:

1. Education of employes.
2. Safeguarding of equipment.

It should be manifest that the more important of these two is the former, education of employes. On this point, however, there are those who hold that safeguarding of equipment is of prime importance. I base my opinion that education is more important than safeguarding purely upon the experiences I have had in my own organization. I do not wish to infer that safeguarding is not important, I merely want to clearly state that I believe that education is the prime endeavor.

It has long been contended that 80 per cent of industrial accidents arise as the result of the human element. In the company I have the honor to represent, the number of accidents that may be charged to acts of commission and omission on the part of the human element rises to 90 per cent and slightly more. Education is the only known and developed instrument with which to combat the various causes that link to comprise what we term the human element.

Human nature is a queer thing. The human baby is about the only animal which, at birth, is void of knowledge or instinct. Yet it has latent within its brain untold powers of developing knowledge. Whether or not these powers are ever brought into existence depends largely upon environment and circumstance. Safety education can be both environment and circumstance. It is certain that this latent knowledge must be developed. The baby must be trained. So it is with man.

Susceptible to Training

When man starts on a job he is susceptible to training but not necessarily trained. Especially as relates to safety, employes of the petroleum industry must be trained. Safety is new in the oil business and its economies must be instilled into the hearts and minds of men before they can fully appreciate and understand its monetary and humanitarian laws.

Most peole have to learn that a bargain is not a bargain unless it is usable and needed. Most of all, a bargain is not a bargain if it cannot be afforded. Short cuts, undue haste and many other similar acts that involve chance taking

(Continued on Page 168)

"Fuel (oil)," said Mr. W. S. Farish in a report to the American Petroleum Institute, "produced at the average United States refinery from domestic crude is a by-product and must be sold regardless of price"

Dubbs licensees are converting this fuel oil all into good gasoline and coke, which means large profits from the by-product of the refiner who can crack only gas oil

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Late News From the Fields

OKLAHOMA

The production of the Greater Seminole area July 16 was 397,409 bbls. from 2,012 wells.

Pool—	Bbls.
Little River	77,073
Carr City	14,596
Maud	11,813
Mission	32,630
Bowlegs	34,863
Earlsboro	79,699
Seminole City	34,155
East Seminole	5,824
Searight	11,124
St. Louis	71,184
Asher	13,669
Sasakwa	10,779
Total	397,409

Production at Oklahoma City, for July 16 was 21,457 bbls. which is an increase of 172 bbls. The increase in production was over the week end when the Mid-Kansas Oil & Gas Co.'s No. 1 Fortson increased from 5 bbls. an hour to 60 bbls. an hour, then developed a fishing job at a total depth of 6,560 feet. On a latter report it is drilling deeper at 6,570 feet where it made 1,547 bbls. on the gauge of July 16.

Owners advise that the Smith & Knisely's No. 1 Hayden, SE cor. NW, Section 19-20-19, Mayes County, is drilling at 565 feet in gray lime. The test had a showing of oil at 280 feet.

Tom Slick Oil Co.'s No. 1 Alexander, NE cor. NW SE, Section 19-6-4, Pottawatomie County, made 225 bbls. in the last 12 hours from the Viola lime at 3,627-45 feet. This new well drilled out the plugs and started flowing at once.

KANSAS

McPherson Oil & Gas Co.'s No. 1 Decker, in the C SE Section 11-19-2w, McPherson County, is making 6,000,000 feet of gas and fishing for tools, at a total depth of 2,914 feet; the top of the chat was encountered at 2,893 feet.

In the townsite of Greenwich water has made its appearance in several wells. Deal Oil Co.'s No. 1 Townsite, NE cor. SW SW, Section 15-26-2, Sedgwick County, was flowing at the rate of 40 bbls. an hour from the chat pay at 2,923-27 feet.

W. F. Kenney and others' No. 1 Richards in the townsite of Greenwich in NE cor. SE SE, Section 15-26-2, Sedgwick County, was swabbing and flowing at the rate of 100 bbls. an hour for the first six hours when it made 626 bbls. from the chat pay at 2,925-27 feet.

Mars Oil Co.'s No. 1 Miller, SE cor. SW, Section 2-26-2, Sedgwick County, swabbed 700 bbls. in 20 hours from the pay at 2,890-93 feet.

GULF COAST

HOUSTON, Tex., July 16.—New dome production was opened on the Gulf Coast at the opening of the week with the bringing in by The Texas Company of its No. 1 Lake Pelto, Section 8-23s-18e, on what is known as the Lake Pelto Dome in southern Terre Bonne Parish, Louisiana. Reports received in Houston indicated the well flowed at the rate of 100 bbls. daily of 18 gravity oil from a total depth of 1,288 feet. The well was completed last week as a small gasser but was deepened a few feet and two joints of screen set to take in both sands. Lake Pelto is one of the several dome prospects taken over by The Texas Company from the Louisiana Land & Exploration Co., on which so far oil has been found on two, gas on one and the salt on another, all of the first tests drilled on each.

Gulf Production Co.'s No. 15 Luscher, Blueridge, was completed late Monday flowing 1,000 bbls. of pipe line oil daily from sand at a total depth of 4,003 feet.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., July 15.—The Texas Company's No. 1 Dallas Wilson cored the adobe above the Edwards lime at midnight last night and showed a saturation of oil making it highly probable that it will be a producer and open a new Edwards lime pool 10 miles east of Seguin and 10 miles southwest of the town of Luling. Depth to top of Georgetown is 2,563 feet. Georgetown is about 50 feet thick. Ever since this well topped the Austin chalk at 2,237 feet and 200 feet higher than expected it has been watched with closest interest and all news from the test has been favorable.

WEST TEXAS

FORT WORTH, Tex., July 16.—Midwest Exploration Co.'s No. 1 Keeny, southwest part of R. Cochran Survey, Coleman County, total depth 2,012 feet, in Fry sand at 2,005 feet, made 30 bbls. hourly first four hours.

Jack County Petroleum Production and The Texas Company's No. 1 H. C. Shanafelt, Isaac Hughson Survey, had deep oil sand from 4,569-70 feet. Oil filled 1,800 feet and is making some gas. First flow was 46 bbls in 24 hours, second day flowed 56 bbls. in 24 hours. This well offsets producers but the 3,100-foot pay was passed up. Shell Petroleum Corp. developed one well in 4,500-foot pay eight years ago, 9 miles southeast on same trend, will run 4-inch casing and drill in.

CALIFORNIA

LOS ANGELES, Calif., July 15.—Midway Sunset and Kettleman Hills sprang into the limelight during the past week due to developments of importance in each area. Two new wells blew in under extremely heavy gas pressure in the Maricopa Flats section of the Midway Sunset Field and another in the north dome of Kettleman Hills. Both of these areas should reflect the completion of several other good wells in the very near future although only three new wells will be permitted to produce in the latter field due to the mutual curtailment program being sponsored by individual operators and Secretary of the Interior Wilbur.

Drilling operations out in the Maricopa Flats, a localized area which is in reality only a small component part of the Midway Sunset Field, have been greatly stimulated and it is quite likely that at least 10 more wells will be spudded in soon. The initial completion of the Signal Oil & Gas Co. in this section did not show any great promise when finished last year but the second well of this company blew in a few months ago doing better than 1,000 bbls. daily and resulted in the immediate starting of several others on adjoining acreage. The North American's No. 1 Sunset Extension, which blew in barefoot a few days ago flowing 3,500 bbls. of unusually clean 23 gravity oil daily from 3,043 feet was one of the several new projects which were started subsequent to completion of the Signal's first big producer, No. 2 Sheehan. The Doyle Petroleum's No. 1 Weir, another well in the immediate area blew in a few days ago under a natural flow doing 410 bbls. of clean 24 gravity oil daily from 3,412 feet. This project which blew in while being bailed for a casing test is expected to build up after cleaning itself out. Development work in the north dome of the Kettleman Hills was enlivened when the Shell's No. 1 Armstrong blew in rather prematurely flowing 200 bbls. of the usual 60 gravity high grade oil and approximately 10,000,000 feet of wet natural gas daily from 6,553 feet. This new well which was subsequently killed in order to drill ahead, is located between the Milham's Elliott property and the General Petroleum's Oschner lease, being situated about 3 miles southwest of the Milham's discovery well which is still flowing 3,400 bbls. and 75,000,000 feet of wet natural gas daily from 6,553 feet.

Kettleman Hills operators are meeting for a final rectification of plans which limit development work in the Kettleman Hills and a definite tangible program is expected to be announced within the next few days. It has been tentatively agreed that operators will refrain from all but a small amount of drilling until January 1, 1931. Three wells will be permitted to be completed in order to reduce pressure on the Milham's discovery in an effort to effect a complete shutdown until expiration of the time limit.

High Spots in Field News

ROCKY MOUNTAIN AREA

Sulphur showing in some New Mexico wells. LaBarge Field, Wyoming, had 240-bbl. well.

NORTH LOUISIANA-ARKANSAS

Second completion in Mount Holly not so good as first. Failure in Dixie district, Caddo Parish.

KANSAS

McPherson County is again center of interest. Recent 5,000-bbl. well followed by good gassers and new locations.

NORTH TEXAS AND PANHANDLE

New pools in Young and Jack Counties.
Big wells completed in Gray County.
Extensions in Coleman and Brown Counties.

OKLAHOMA

Oklahoma City Pool's new high 21,457 bbls. from 7 wells.
Asher, Sasakwa and Oklahoma City Pools appear "spotty." Water appears in important wells.

SOUTHWEST TEXAS

The Texas Company's No. 1 Dallas Wilson, east of Seguin and southwest of Luling, showed saturation of oil, making it highly probable it will be a producer and open new Edwards lime pool.

WEST TEXAS

New well in Irion County is best to date.
Small producer may open new pool in Crockett County.
Slight extension on east side of Hendricks.
Midwest Exploration test, Coleman County, flowed 56 bbls. second day.

GULF COAST

Humble deep sand development to be extended. Play to be started for 7,400-foot production southeast of Jennings Field. New dome prospects in near Eureka and Blue Lake.
New dome opened at Lake Pelto, Terrebonne Parish, Louisiana, by The Texas Company's well which flowed at rate of 100 bbls. daily of 18 gravity oil from 1,288 feet.

CALIFORNIA

Two new wells blew in under heavy gas pressure in Maricopa Flats section of Midway-Sunset Field and another in north dome of Kettleman Hills.
Kettleman Hills operators are still considering plans to limit development work. It has been tentatively agreed to refrain from all but small amount of drilling until January, 1931.

AWARDED AVIATION CONTRACT

HOUSTON, Tex., July 15.—Humble Oil & Refining Co., of Houston Tex., has been awarded the contract by the war department to furnish all aviation gasoline at government flying fields in San Antonio, Galveston, Houston, Fort Sill and El Paso.

CAPTAIN TONKIN DIES

OIL CITY, Pa., July 16.—John Tonkin, aged 32 years, prominent oil and gas man and father of John B. Tonkin, vice president and general manager of the Peoples Natural Gas Co. of Pittsburgh, died at his home here yesterday. Captain Tonkin was president of the Central Kentucky Gas Co.

A.P.I. WEEKLY REFINERY STATISTICS

NEW YORK, July 16.—The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to stills, gasoline stocks and gas and fuel oil stocks—for the week ending July 13 follows:

	(1)	(2)	(3)	(4)
East Coast	100	3,037,600	5,716,000	10,613,000
Appalachian	85.5	607,600	1,147,000	1,072,000
Indiana, Illinois, Kentucky	97.7	2,034,200	6,447,000	3,341,000
Oklahoma, Kansas, Missouri	71.4	1,744,300	3,757,000	4,065,000
Texas	87.5	3,778,400	4,942,000	12,136,000
Louisiana and Arkansas	90.6	1,288,700	2,177,000	5,592,000
Rocky Mountain	92.2	464,100	1,847,000	508,000
California	95.6	5,620,100	11,581,000	102,952,000
Total United States	91	18,575,000	37,614,000	140,279,000
Texas Gulf Coast	98.2	2,973,700	4,118,000	9,314,000
Louisiana Gulf Coast	97.5	901,400	1,917,000	4,566,000

(1) Per cent refinery capacity represented. (2) Crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.

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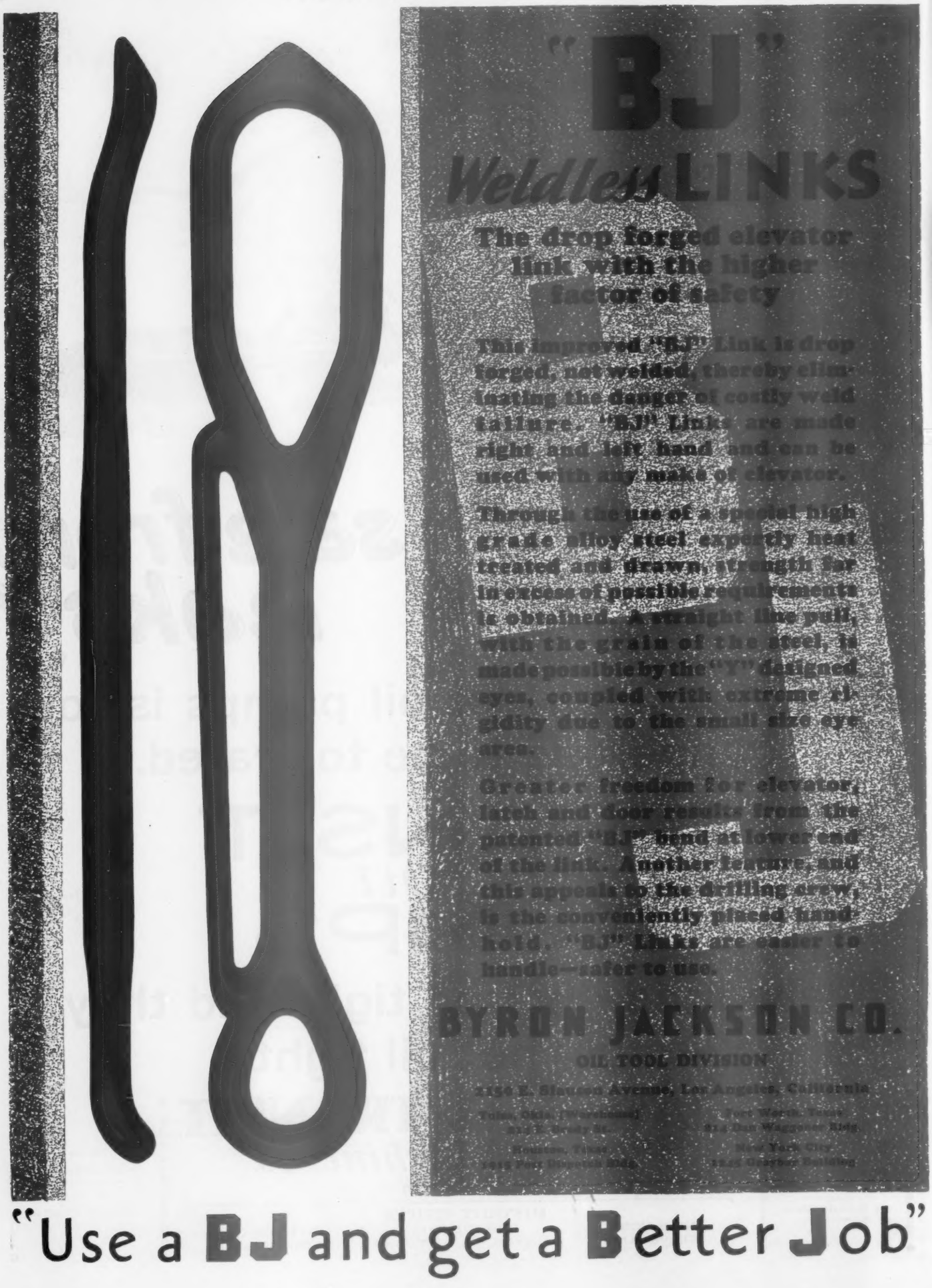
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New Pools Not Consistent Producers

Oklahoma City, Asher and Sasakwa Appear "Spotty." Water Appears With Oil in Important New Wells

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

In the Oklahoma City Pool one well was drilled into the deep gas horizon the past week. Indian Territory Illuminating Oil Co.'s No. 1 Watters, NE cor. NW NE Section 25-11-3w, has been drilled to a total depth of 6,349 feet. It had the top of the Siliceous lime at 6,338 feet, and the gas sand at 6,224-79 feet. Seven-inch casing was landed at 6,233 feet. After drilling out the plugs the test blew in as a gas well, making 80,000,000 feet of wet gas with 2,200 pounds rock pressure. The well was shut in after a production test had been made to install gas traps, to decide whether the test will be deepened or be allowed to produce gasoline. No estimate of the gasoline content can be made, and no gasoline could be saved, until the proper equipment is at the well. Empire Pipe Line Co. laid a 6-inch gathering line to the well. Soon after the gas blew in the bailer was run into the hole and a column of water shot over the crown block and a few seconds later the gas was going twice as high.

Second in importance is the same company's No. 1 Button, SW cor. Section 19-11-2w, which for the last few days has been producing approximately 12 bbls. an hour at a total depth of 6,393 feet. This small quantity of oil has not increased with deeper drilling and the well is now bottomed at 6,398 feet.

Drilling Increases Production

The Mid-Kansas Oil & Gas Co.'s No. 1 Fortson, C SW NE Section 24-11-3w, Oklahoma County, which has been producing around 90 bbls. a day for the past two weeks while drilling deeper, has incrcased its production over the week end. The increase came from 6,542-60 feet, where it is now making 60 bbls. an hour, the 24-hour gauge being 1,240 bbls., and still drilling. This well is deeper than any of the other tests in that part of the field. It is causing considerable discussion, as it is located between the discovery well and the Mid-Kansas Oil & Gas Co.'s No. 2 Fortson, a quarter of a mile north, which is producing around 5,600 bbls. a day.

The Sinclair Oil & Gas Co.'s No. 1 Stamper, NE cor. SW SW Section 30-11-2w, started to produce cut oil after being drilled 1 foot deeper to a total depth of 6,499 feet. It increased the oil production but brought in the water. It made as high as 600 bbls. of water in 24 hours. On Saturday of last week it was deepened another foot, now making the total depth 6,500 feet. It also helped the oil production, increasing it from 3,590 bbls. to 4,970 bbls. Sinclair Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Kinter, NW cor. SE Section 30-11-2w, made 1,725 bbls. of gasoline on the gauge of July 13.

Seven wells started to spud in the Oklahoma City Pool last week and cellars for 20 rigs were dug. As it takes about six months to complete a well in this field, these new locations will have little bearing on the production column until late in the year or early in 1930. The wildcat test of the Prairie Oil & Gas Co., Phillips Petroleum Co. and Tom Slick Oil Co.'s No. 1 Sudik, about 6 miles southeast of the pool in the C NE NE Section 8-10-2, Cleveland County, the deepest drilling test in the Oklahoma City area, had a small showing of oil in the lime from 6,915 to 6,928 feet. This is the second showing of oil the test has had while drilling.

Oklahoma City Production

The Oklahoma City production for July 15 was 21,284 bbls., a new high for that pool up to date. The production was divided as follows:

Company and well—	Bbls.
Colline	4,908
I. T. I.'s No. 1 fee	1,941
I. T. I.'s No. 1 Button	212
Mid-Kansas's No. 1 Fortson	1,241
Mid-Kansas's No. 2 Fortson	5,772
Sinclair's No. 1 Stamper	5,410
Sinclair's No. 1 Kinter	1,695
Total	21,284

Asher Revives

Interest at Asher is being revived by the completion of a good oil well west of the discovery and by a small producer on the townsite in Section 19-6-4, Pottawatomie County. Simms Oil Co. completed its No. 3 Laster, in the SW cor. NE, Section 19-6-4, in the Viola lime at 3,610-25 feet, where it made 2,105 bbls. in 20 hours, and 3,660 bbls. natural in 24 hours. Commercial Development Co.'s No. 1 Townsite, in the NE NW, Section 19-6-4, Pottawatomie County, has been plugged back to 3,690 feet where it produced 375 bbls. and very little water. This is the first producing well in the townsite of Asher after several tests were found to be failures and have been abandoned. The Texola Oil Co.'s No. 1 Townsite drilled out the plugs after cementing casing at a total depth of 3,680 feet, where the test produced 735 bbls. in 15 hours. The production of the field on Monday, July 15, was 13,184 bbls. from 14 wells, a new peak for production in that pool.

Texola Oil Co.'s No. 1 Asher Townsite, Block 52, in Section 19-6-4, Pottawatomie County, started flowing when the plug was drilled out and made 735 bbls. in 15 hours on the gauge of July 13. The casing was cemented at 3,661 feet and the hole drilled to a total depth of 3,680 feet. The 14 producing wells in the Asher Pool gauged on July 13 12,915 bbls. which is a new peak for that field.

Production Situation

The overproduction outlook of last week has changed in the past few days. While in some localities big flush production is expected to be brought to the surface, these areas, it is thought, will be small in size and will be offset by the natural decline of the older pools. Asher is not a disturbing factor any more and many express an opinion that its lime production will be short lived. The pool shows an increase this week and several more wells are due to be completed in a short time which will swell the production temporarily. The extension to the north of the St. Louis Pool in Township 7-4, does not appear to amount to much at this time. Most of the wells are showing water in all the producing horizons and the wells that have been completed have all made small producers. While a lot of drilling is under way in this township small producers are expected to be the rule. Some water wells have been drilled in the Sasakwa Pool. Sasakwa has plenty of room to develop into a major sized pool but from the experience of oil operators in the eastern part of Seminole County, where large producing wells have been offset by dry holes is a criterion it may be spotted. Water has made its appearance in the deep sand wells at the Oklahoma City Pool and the temperature of the oil in the shallower wells is gradually increasing, which gives indications of a strong water pressure which in all probability will soon show up with the oil production. From all appearances the areas which last week looked as if they might develop into large pools may have been overestimated and flush production is not expected to be as large as many were anticipating. Seminole production has been helped by the pools in Section 18-9-6 and Section 5-7-7. These two spots have leases with big production at this time, but do not show indications of developing into large pools. The total production for Greater Seminole area for July 13 was 405,788 bbls., which includes the eight Seminole pools, St. Louis, Asher and Sasakwa Pools. The production given is 3,000 bbls. higher than it was a week before. Little River production is up on account of the big wells in Section 5-7-7. The Earlsboro Pool is up due to the flush production in Section 18-9-6. Seminole City production is up about 500 bbls. while all the rest of the pools show declines. St. Louis and Sasakwa Pools are holding about even with last week.

Progress in New Pools

In the extension to the Earlsboro Pool to the southeast in Section 18-9-6, Seminole County, the production of the seven wells on July 13 was 28,646 bbls. which is divided among the following companies, Gypsy Oil Co.'s No. 1 Payne, 5,300 bbls.; Magnolia Petroleum Corp.'s four wells on the A. Anderson, 16,905 bbls.; same company's No. 1 D. W. Anderson, 2,311 bbls.; Prairie Oil & Gas Co.'s No. 1 Raitman, 4,130 bbls.

The production in the Sasakwa Pool for July 12 was 11,643 bbls. from the following leases, Sinclair Oil & Gas Co.'s four wells on the Davis in Section 7-6-8, 7,219 bbls.; Prairie Oil & Gas Co.'s No. 1, Section 18-6-8, 1,870 bbls.; Shell Petroleum Corp.'s No. 1 Holotke, Section 7-6-8, 1,595 bbls.; Signal Oil Co.'s No. 1 Bond, Section 13-6-7, 959 bbls.

Independent Oil & Gas Co. has entered the Sasakwa area by purchasing a half interest in the SE NW in Section 8-6-8, Hughes County, from the Yeager Oil & Gas Co. for a cash consideration of $50,000, $50,000 in oil and a free well to the Wilcox sand. The location has not been made. Same company purchased a quarter interest in the NW SW, Section 18-6-8, Seminole County, at the rate of $500 an acre.

The Gypsy Oil Co. and others in the

(Continued on Page 111)

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Bros.' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Shut down 385 ft.
Washoma Oil Co.'s No. 1 Acre, SW cor. NE Sec. 14-24-11w	Rig.

BECKHAM COUNTY

Kay and others' No. 1 Martin, C E half E half NW Sec. 32-8-24w	Location.
F. Coogan's No. 2 Holmesburg, SE NW Sec. 25-9-25w	Drlg. 2,500 ft.
Producers Exploration Co.'s No. 1 Seidell, SE cor. SW SW Sec. 17-9-22w	Shut down 2,402 ft.
Carson and others' No. 1 Danby, SW cor. SE NE Sec. 20-8-22w	Drlg. 1,547 ft.

BLAINE COUNTY

Lowen and others' No. 1 Unknown, NW cor. SW NW Sec. 27-16-11w	Spudded and shut down; renewing leases.
Washoma Oil Co. and others' No. 1 Phillips, C NW SW Sec. 13-19-10w	Drlg. 1,830 ft.

CADDO COUNTY

Abernathy & Brown's No. 1 Horton, SE cor. Sec. 8-6-13w	Shut down 535 ft.
J. B. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w	Shut down 150 ft.
W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w	Shut down 3,394 ft.

CLEVELAND COUNTY

Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w	Shut down 3,130 ft.
Phillips Pet. and T. B. Slick's No. 1 Sudick, NE cor. NE Sec. 8-10-2w	Drlg. 6,910 ft.

COAL COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 Harris, SE NE Sec. 10-1-11e	Shut down 1,975 ft.
W. E. McGraw's No. 1 King, C SW NE Sec. 11-1-8e	Fishing 1,500 ft.
Indian Territory Illuminating Oil Co.'s No. 1 Cook, SW cor. NW Sec. 10-1-11	Drlg. 7,565 ft.
J. S. Cosden's No. 1 Richardson, NW cor. NE NE Sec. 6-2-8	Fishing 1,855 ft.
McGinley & Sigler's No. 1 Willsey, NW cor. SE SE Sec. 7-2-8	Drlg. 700 ft.
E. W. Whitney's No. 1 Brown, C SE NE Sec. 10-2-8	Shut down 202 ft.

COMANCHE COUNTY

Muse et al's No. 1 Cross, NW SW SW Sec. 4-1-9w	Drlg. 1,910 ft.
Green and others' No. 1 Wilson, C NE SW Sec. 14-1-12w	Shut down 4,055 ft.

CREEK COUNTY

Shaffer et al's No. 1 Moore, SW SE SE Sec. 3-18-9	Drlg. 465 ft.

CUSTER COUNTY

W. E. Witt's No. 1 Wellman, C SE Sec. 1-14-14w	Rig and tools.

GARFIELD COUNTY

E. L. Love and others' No. 1 White, SE cor. NW Sec. 9-24-6w	Drlg. 5,540 ft.

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w	Spudded and shut down.
J. M. Henry and others' No. 1 Abraham, SE cor. NW Sec. 4-5-8w	Rig.

GRANT COUNTY

Baucher et al's No. 1 Deadman, SW SE Sec. 12-28-4w	Spudding.
Cowden and others' No. 2 Vollmer, CEL NE SW Sec. 22-25-4w	Shut down 5,640 ft.

GARVIN COUNTY

Gardner Pet. Co.'s No. 1 Halverson, SW cor. NE Sec. 8-4-2	Drlg. 2,660 ft.

GREER COUNTY

Helmerick & Payne's No. 1 Henck, NW cor. Sec. 23-6-24w	Drlg. 485 ft.
I. T. I. O. and others' No. 1 fee, C SW NE Sec. 17-6-24w	Drlg. 1,850 ft.
S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w	Drlg. 625 ft.

HARMON COUNTY

I. T. I. O. Co.'s No. 1 fee, C SW SE Sec. 17-5-24w	Rig.

HARPER COUNTY

Sinclair Oil & Gas' No. 1 Howell, C SW SW Sec. 14-26-24w	Machine.

HASKELL COUNTY

Holden's No. 1 Phillip, SE cor. Sec. 5-9-18e	Shut down; show of gas 1,700 ft.
Marion Oil's No. 1 Sanders, NW NE SW Sec. 10-9-18e	Shut down 2,387 ft.
Sanboise Gas' No. 1 Unknown, SW NW SE Sec. 32-9-21e	Shut down 2,100 ft.

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McPherson Again Center of Interest

Recently Drilled 5,000-Bbl. Well Followed by Good Gasser and New Locations. Floods Retard Kansas Operations

By W. A. Spinney
Staff Correspondent, Kansas Fields

Interest in Kansas this week centers in McPherson County, where the Shell Petroleum Corp. recently completed a big wildcat producer in chat. The McPherson Oil & Gas Co. found a gas well in chat 4 miles north of the Shell Petroleum Corp.'s new well. Like the big oil well the new gasser is located on a large block of leases in which the McPherson Oil & Gas Co. holds the gas rights and the Shell Petroleum Corp. the oil rights. The block held jointly in northwestern Harvey and eastern McPherson Counties consists of 40,000 acres. The gas well known as the No. 1 Decker, C SE, Section 11-19-2w, found chat at 2,887-2,914 feet where the well started making 6,000,000 feet of gas and the tools were lost while still drilling in chat. The Shell Petroleum Corp.'s No. 1 Reitz, NW cor. SE SW, Section 1-20-2w, was estimated at the time it was first drilled in to be good for 5,000 bbls. but owing to shortage of stock tanks and no pipe line connections the well was pinched to approximately 1,100 bbls. a day and the production on July 13 was 1,077 bbls. still pinched in. Another test in the same county that is holding interest is Helmerich & Payne's No. 1 Rosen, NE cor. SE SW, Section 25-21-2w, which found the chat at 3,025 feet and drilled in 5 feet. The crew is underreaming the casing to the top of the chat before drilling the test deeper.

The Texas Company has made the first location for a test near the Shell Petroleum Corp.'s No. 1 Reitz. The new location will be a quarter of a mile southeast of the discovery well known as No. 1 Munn, NW NE, Section 12-20-2e. The Texas Company has checkerboarded acreage in the line of folding in this area.

Floods Retard Operation

Owing to heavy rains the flood waters of streams in different part of the State have slowed down operations. Some are shut down while the production in the various pools in Sedgwick County has been seriously retarded. The Valley Center Pool has suffered. The water has been flowing over the rig floors of several wells and was still rising. In the State Pool, north of Winfield in Cowley County, most of the pumping wells were shut down, while in the deep sand field north of Rainbow Bend water covered considerable territory blocking the roads and operation in that area.

New Production in Sedgwick

The latest wildcat test to find oil in Sedgwick County is the Mars Oil Co.'s No. 1 Miller, SE cor. SW, Section 2-26-2, 1½ miles north of the Lygrisse Pool in the eastern part of the county. The test is flowing at the rate of 115 bbls. an hour from chat at 2,893-94 feet, the oil tests 44 degrees gravity. The owners were waiting for a pipe line connection before drilling deeper. The well showed about 2,000,000 feet of gas and sprayed oil over the top of the derrick.

Smith & Ash's No. 1, NE cor., Section 28-28-1, Sedgwick County, a half mile south of the discovery well in the Robbins Pool, had a small showing at 3,089-3,100 feet and drilled to 3,153 feet and shut down.

The Shell Petroleum Corp.'s No. 1 Nolan, SE NE, Section 20-28-1, Sedgwick County, in the Robbins Pool, flowed 163 bbls. in 24 hours on Monday's gauge.

Phillips Petroleum Co. announced another location in Ellis County. It will be an offset to the recently completed Johnson well, west of Hays, which was flowing about 300 bbls. a day from the Oswald lime at 3,595 feet. The new location is No. 1 Berjo, SE NW, Section 9-13-19w. Thomas & Moncrief, associated with Phillips Petroleum Co. in the initial discovery well, after they had assembled the acreage, have staked a test two locations east of the Johnson well which is shut in for pipe line connections. Phillips Petroleum Co.'s No. 1 Heider, in Section 8-12-17w, has landed the 6-inch casing and is drilling ahead.

Tulsa Oil Co. and others announced a new location in the southern part of Lyons County. It is a semiwildcat and is located in the NW cor. NE NE, Section 27-21-11. The test will be the first this company has started in Kansas and it will be to the Bartlesville sand, where the majority of the production in the county is found.

Tap Barber Gas Field

A new pipe line is to tap the Barber County gas field. A right of way for a 20-inch line has been obtained by the Barber Oil & Gas Co. Construction is under way from No. 1 Alexander, owned by the company, in Section 13-33-13w, to the town of Medicine Lodge about 10 miles northeast of the gas field. The same company is standardizing on its test, No. 1 Angell, in the C NW NE, Section 14-33-13w, at 4,486 feet. The test will extend the gas producing area if it should make a well.

J. R. Robertson and A. W. Hinkle have 5,500 acres of oil and gas leases in Barber County and will start a wildcat test on this block in a short time. Several major oil companies have purchased acreage close to the proposed test, including the Gypsy Oil Co., The Texas Company, Tom Slick Oil Co., and Barnsdall Oil Co. The territory in which the test is to be drilled has long been considered favorable by operators and geologists through the completion of several large gas wells. The location is No. 1 Hillyard, SE cor., Section 11-32-10w.

Water in Kingman Test

The Gypsy Oil Co.'s test near Murdock, Kingman County, is showing water in the deep pay horizon. It was located on a core drilled structure in a large block of leases. The test is located just over the line from Sedgwick County. It is No. 1 Kincaid, NE cor. NW, Section 18-29-5w, and it had 2,000 feet of water from what is supposed to be the Wilcox sand at 4,366-73 feet. The test found the top of the dolomite at 4,292 feet.

Another wildcat in Sedgwick County that is getting deep with nothing showing is T. B. Slick and others' No. 1 Rosenhagen, SW cor. SE NE Section 33-27-4w. It is still drilling in black shale at 4,120 feet after shutting off the water.

Sedgwick County Production

The production by companies and leases in the Sedgwick County area for July 13 is shown by the following:

Company, lease—	S.T.R.	Wells	Bbls.
Aladdin:			
Bennington	6-26-1	2	635
Barnsdall:			
Samuel	24-25-1	1	Off
Bu-Vi-Bar et al:			
Branch	6-26-1	2	704
Bright "A"	6-26-1	2	220
Bright "B"	6-26-1	5	2,234
Byers	7-26-1	1	132
Emrich	6-26-1	2	549
T. Goodrich	6-26-1	5	635
Lantz	12-26-1w	2	132
Corr	1-26-1w	5	3,299
Lyons	7-26-1e	3	2,204
Reed	1-26-1w	1	387
Roll	7-26-1e	1	352
Rothfuss	6-26-1e	1	11
Shawver	7-26-1e	6	5,109
Wright	12-26-1w	4	4,699
Woodward	7-26-1e	1	138
Connell:			
Cross	27-25-1w	1	10
Davis-Skelly:			
Wilson	1-26-1w	8	2,106
Derby:			
Bowling	6-26-1e	1	96
Gorman	6-26-1e	4	1,423
Dickey et al:			
Robbins	21-28-1e	1	338
Dickey:			
Nolan	21-28-1	1	194
Gypsy:			
Hammant	14-26-2e	3	536
Marland:			
Goodrich	16-25-1e	2	663
No. 1 Black	16-25-1	1	193
Mary Jane:			
Fitch	6-26-1e	2	720
Montour:			
Lavender	6-26-1e	2	1,120
Patton & Wentz:			
Swenson	6-26-1	1	101
Difford	1-26-1w	3	166
Piefer	6-26-1e	1	110
Plains Oil:			
No. 1 Plains	15-26-2	1	350
Prairie:			
Cross	27-25-1w	1	10
Swyser	36-25-1w	3	349
Prod. & Ref.:			
Kuske	24-25-1	1	456
Pyle & Sutter:			
Caldwell	6-26-1e	2	333
Reynolds & Hays:			
Roll	7-26-1	1	360
Robertson et al:			
Creson	6-26-1	1	505
Shell:			
Fisher	15-26-2	1	100
Lygrisse	15-26-1	1	338
No. 1 Community	15-26-2	1	770
Nolan	21-28-1e	1	142
Stearns & Streeter:			
Roll	7-26-1	1	550
Tidal:			
Scherger	6-26-1	3	204
Vickers:			
Nessen	6-26-1	3	333
White Eagle:			
Baylor	6-26-1	1	19
Robbins	20-28-1	1	116
Total		99	34,141

Lamont Pool Extended

Greenwood County was enlivened by the finding of oil in the extension of the Lamont Pool. North of this pool conditions have been slightly improved by the Empire Oil & Refining Co.'s No. 2 Norton, which appears good for 50 bbls. It is located in the NE NW NE Section 22-22-12. The well is producing from the Bartlesville sand at 1,783-93 feet and after a light shot it started swabbing 50 bbls. Unlike most of the wells in the main pool, it is not showing water. Two other drilling operations in the north Lamont extension is the Empire Oil & Refining Co.'s No. 2 Holderman, NE SE SW Section 15-22-12, which is drilling at 1,000 feet. Closely following the discovery well of the Empire Oil & Refining Co., No. 1 Norton, in the SW cor. NE Section 22-22-12, the same company se-

(Continued on Page 76)

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

Company, farm and location—	Remarks:
BARBER COUNTY	
Skelly Oil Co.'s No. 1 Temple Ranch, Sec. 13-34-15w	Rig.
Barbara Oil Co.'s No. 1 Angel, NW cor. NE Sec. 14-33-13w	Rigging up standard tools 4,484 ft.
Robertson et al's No. 1 Powell, SE cor. SE Sec. 11-32-10w	Rig on ground.
Allison & Fitzwilliams' No. 1 Morrisse, C NW SE SE Sec. 9-30-12w	Drlg. 3,435 ft.
BARTON COUNTY	
Gobel & Bending's No. 1 Bartlett, SW cor. SW Sec. 28-17-15w	Shut down 1,190 ft.
Everett & Wiley's No. 1 Ward, NW cor. SW Sec. 12-20-13w	Shut down 3,948 ft.
BUTLER COUNTY	
Lario Oil & Gas' No. 1 Gordon, NW cor. Sec. 15-26-3	Rig.
Sinclair Oil & Gas' No. 1 Johnson, NE cor. Sec. 16-26-3	Rig.
Empire O. & R. Co.'s No. 1 Parks, NE NW Sec. 36-29-4	Rig.
Arkansas Natural Gas' No. 1 Campbell, SE cor. Sec. 9-26-3	Rig.
White Eagle's No. 1 Bachelder, SW cor. Sec. 17-25-3e	Drlg. 2,540 ft.
Crawford et al's No. 1 Thompson, NW cor. SW Sec. 2-24-3e	Drlg. 1,447 ft.
Aladdin Petroleum Co.'s No. 1 Bronsenger, NE cor. NE SW Sec. 24-27-3	Setting 8-in. csg. 2,430 ft.
Shell Petroleum Corp.'s No. 1 Thiesstin, C SE SW SE Sec. 10-24-3	Hole full water 2,920-30 ft.; total depth 3,025 ft.; abandoned.
CHASE COUNTY	
Marland Prod. Co.'s No. 1 Hiatt, SW NE Sec. 8-21-8e	Hole full water 3,118-28 ft.; shut down.
COWLEY COUNTY	
Landon & Slick's No. 1 Daniels, NE SE Sec. 6-30-5e	Drlg. 360 ft.
J. B. Markley's No. 1 Tatum, SE cor. SW Sec. 11-31-6	Shut down 520 ft.
DICKINSON COUNTY	
Cress & Hawky's No. 1 Menil, NE cor. Sec. 12-15-2	Rig.
Johnson's No. 1 Doetwiler, SW NE NW Sec. 32-16-4e	Shut down 3,020 ft.
Prairie Oil & Gas Co.'s No. 1 Morgan, NW cor. Sec. 26-16-3e	Drlg. 1,790 ft.
Milmac's No. 1 Buhler, SW NE Sec. 28-16-4e	Straightreaming 2,341 ft., total depth.
ELLIS COUNTY	
T. C. Johnson's No. 1 Robbins, SW NW Sec. 15-14-16w	Hole full water 3,468-78 ft.; shut down.
John Brown's No. 1 Gestner, SE cor. SW NE Sec. 13-13w	Shut down 3,964 ft.
Rush Oil Co.'s No. 1 Gatewood, NW cor. NW Sec. 4-15-20w	Fishing 2,555 ft.
Finney & Weiner's No. 1 Freeman, SE cor. SW Sec. 24-15-20w	Spudded and shut down.
Phillips Pet. Co.'s No. 1 Johnson, SW cor. NE Sec. 9-13-19w	Drlg. 3,593-95 ft.; swabbed 624 bbls. in 33 hrs.; 1,100 bbls. in stock tanks.
Phillips Pet. Co.'s No. 1 Schneider, NW cor. Sec. 20-12-17w	Drlg. 3,429-39 ft.; 108 bbls. in 8 hrs.; shut down.
Burger et al's No. 1 Hadley, SW cor. SW NW Sec. 20-11-17w	Drlg. 2,680 ft.
John Brown No. 1 Company's No. 1 Gestner, SE cor. SW NE Sec. 13-13-18w	Shut down 3,964 ft.
ELLSWORTH COUNTY	
The Texas Company's No. 1 Sherman, NE SW Sec. 16-17-6w	Shut down 50 ft.
EDWARDS COUNTY	
British American Oil Co.'s No. 1 McCarty, NE cor. NW Sec. 31-25-17w	Sand 4,666-70 ft.; 14,000,000 ft. gas; completed.
GRAHAM COUNTY	
Gulf Coast Oil Co.'s No. 1 Johnson, C S half Sec. 27-8-25w	Drlg. 3,925 ft.
GREENWOOD COUNTY	
F. Konkay et al's No. 1 Rock, NW NE NE Sec. 7-27-12	Spudding.
Ward & McGinnis' No. 1 Anderson, NE NW SW Sec. 13-25-10	Rig.

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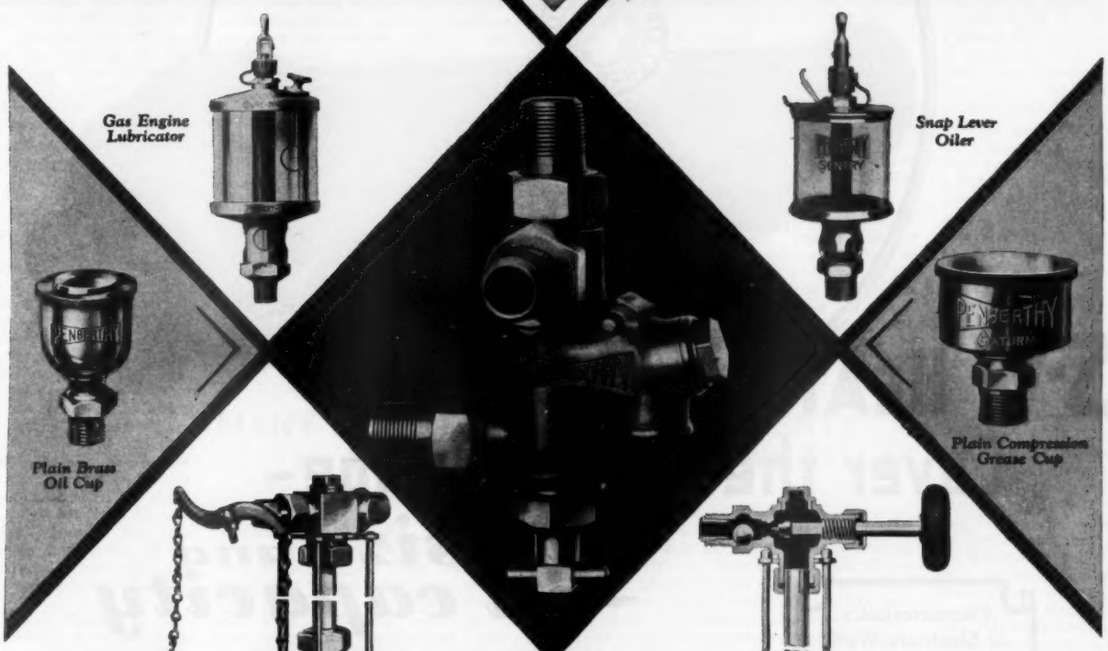
PENBERTHY PRODUCTS

PREDOMINATE



Gas Engine Lubricator

Snap Lever Oiler

Plain Brass Oil Cup

Plain Compression Grease Cup

Navy Type Liquid Level Gauge

Safeguard Automatic Liquid Level Gauge

Screw Plunger Grease Cup

Spring Compression Grease Cup

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SW-5

Second Completion in Mt. Holly Area

Not so Good as First Producer. Failure in Dixie District, Caddo Parish. Four New Locations Made in the Pool

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., July 15.—Just about a week after McDonald Brothers got a producer in a sand 100 feet above present production in the Mount Holly district, Ouachita County, Arkansas, they completed a second in the same horizon, which had been passed up as barren in the earlier drilling. The new well is No. 3-B Wilson in the SE cor. SW NW, Section 25-15-18, one location south and one west of the discovery. Producing from 5 feet of sand, total depth 2,785 feet, it started flowing 2,500 bbls. of fluid early on July 11 and by noon had gone entirely to salt water. Pinched in to a half-inch choke it improved and made fluid 14 per cent b.s. and 22 per cent water, the oil testing 31.4 gravity. At the end of the second 24 hours it was flowing 700 bbls., 24 per cent water and 36 per cent b.s. Its predecessor in the shallow stuff, No. 2-A Wilson in the NE cor. NW SW of the same section, was a considerably better well when it came in, flowing 150 bbls. by heads, 9 per cent water through tubing and packer from 2,781 feet.

The Dixie district of Caddo Parish had but one completion and it a failure, Standard Oil Co. abandoning No. 2 Oden in the SE NE, Section 18-19-14, as a dry hole at 2,478 feet. Ray-Dawes Drilling Co.'s No. 1 Hunter in the NW NE Section 8-19-14, in the north of production also seems slated for abandonment. It tested two joints of mud with no show of oil or gas from 2,393-36 feet and was coring at 2,452 feet. Haynes Brothers have taken 112 acres in Section 19-19-14, southwest of production and are scheduled to drill two wells starting immediately.

Gold & Sklar's No. 1 Hunter in Section 17-19-14, completed a week ago as a 700-bbl. producer from 12 feet of sand, total depth 2,415 feet, developed salt water shortly afterward but after setting tubing with packer improved somewhat although the production was cut to 300 bbls., 12 per cent water.

Four New Locations

These not-so-good developments have not had any other effect on the pool, four new locations being made, three by the Gulf Refining Co. and one by the Standard Oil Co. The Gulf's new work is No. 1 Hunter, a derrick, NW cor. SE NE, Section 17-19-14, and No. 2 Hunter, NE cor. NE SE, of the same section, and No. 5 Oden in the SE cor. NW NE, Section 18-19-14, also a location. Standard Oil Co.'s No. 7 Hunter is a derrick in the NE cor. SE NW, Section 17-19-14.

Daily production of the pool as of the July 12 gauge was around 1,650 bbls. and production up to the same time totaled 46,750 bbls. of which Gulf Refining Co.'s wells had made 30,357 bbls., Gold & Sklar's 5,000 bbls., Ohio Oil Co.'s 437 bbls. and Standard Oil Co.'s 10,953 bbls.

Dixie Oil Co. tested again at 6,208 feet on No. 91 Dillon, Section 23-21-15, in lime and shell but without results and was coring in the same formation at 6,237 feet. Bayou State Oil Corp. made a 30-bbl. pumper of No. 17 Levee Board, Section 23-22-15, at 1,014 feet.

Delaware-Louisiana Development Co. drilled to 3,922 feet on No. 4 Bollinger, Section 38-23-11, Cartersville district of Bossier Parish, the drill stem filling up 20 fourbles of oil. Bailing and swabbing the well made about 50 bbls. with a little gas and was cemented back to 3,170 feet and then plugged back with cement sacks to 3,130 feet where they set 4½-inch casing and will try to pump from approximately 100 feet below the normal Cartersville horizon. Woodley Petroleum Co.'s No. 6 Whitehurst in the Elm Grove district of Bossier was completed at 1,935 feet making 1,000,000 feet of gas at 240 pounds.

Gas Production

Seven wells in the Monroe Field, three in Union Parish, the least active part of the district for the past several months, added 76,500,000 feet per day to the total open flow, two having initial rock pressures considerably above completions for the past few weeks, even in the high pressure area. Interstate Natural Gas Co.'s No. 2 Flemming in Section 15-20-4, Morehouse Parish, made 21,000,000 feet at 700 pounds, total depth 2,160 feet.

Ouachita Natural Gas Co.'s No. 10 Smith, Section 40-20-4, Ouachita Parish, made 31,000,000 feet at 750 pounds, total depth 2,134 feet. Magnolia Petroleum Co. completed No. 1 fee 401, Section 2-18-3, Ouachita Parish, making 4,000,000 feet at 1,015 pounds, total depth 2,189 feet and Sandidge & Sackett's No. 2 Rea & Green, Section 2-18-4, gauged 3,500,000 feet, total depth 2,236 feet.

Friend & Bahan's No. 1 Barr, previously reported as Bahan & Bahan's No. 1 School, in Section 16-20-4, Union Parish, made 11,000,000 feet of gas at 760 pounds, total depth 2,160 feet. Natural Gas Producing Co.'s No. 1 Josephine Hollis, Section 14-21-3, Union Parish, gauged 3,000,000 feet at 1,037 pounds, total depth 2,190 feet. and Palmer Corp.'s No. 1 Downey, Section 21-21-3, made 3,000,000 feet from 2,190 feet, total depth.

The north edge of the Richland Parish Field and territory between the extreme northern producers and the southern part of the area, where most of the present activity is located, got two wells, both Palmer Corp. completions. No. 1 Jones, Section 22-17-6, made 15,000,000 feet of gas at 1,105 pounds, between 400 and 500 pounds higher than the average Richland well from 2,452 feet and No. 4 Rhymes, Section 21-17-6, made 7,000,000 feet, total depth 2,450 feet. Palmer Corp., which has four operations under way, made location immediately upon completion of these two wells for No. 1-A Jones in the C NE SW, Section 22-17-6.

Semiannual Regauge

These probably will be the last wells completed in Richland and Morehouse before the semiannual regauge of the two fields by the Department of Conservation begins July 17. Results of this check will be published as of October 1 and will determine the permissible pull on each individual well in the two areas. In view of the completion, about that time, of the Monroe-St. Louis and Monroe-Birmingham 22-inch and 24-inch gas lines, this particular report will be of more than usual interest as it will afford an estimate of just how much gas will be available for them and the other six large trunk lines out of Monroe.

Southern Carbon Co.'s No. 1-B Tegola in Section 5-15-6, on the southern edge of the field made only 250,000 feet of gas when tested at 2,461 feet and is shut down for orders. No. 1 Tegola in Section 4-15-6, gauged 46,000,000 feet from a total depth of 2,476 feet on completion a month ago and this well may do as well if deepened a few feet. No. 1 Tegola is about the deepest producer in the whole Richland Field, 2,450 feet being about normal depth.

With more footage than the Dixie Oil Co.'s deep hole in Pine Island, Magnolia Petroleum Co. was coring No. 1 McCook & Hibbler, Section 22-21-10, Cotton Valley district of Webster Parish, at 6,329 feet in red shale. No. 1 Sally Coyle in Section 2-22-11, Sarepta district, tested dry at 2,692 feet, made 3 feet more hole and got a show of oil and shut down for orders.

Nevada County

Besides the Mount Holly wells there were two completions in Arkansas, one in Nevada County where C. F. Steele abandoned No. 1 E. W. Groves in Section 21-14-20, at 2,150 feet and the other in the El Dorado East Field where Gulf Refining Co. finished No. 2 Gaddy, Section 30-17-14, making 18,800,000 feet of gas with a spray of salt water at 2,855 feet. Last February it was completed at 2,859 feet making 49,000,000 feet of gas but mudded up and went on to 3,691 feet and then cemented back to 2,935 feet, tested dry at 2,853 feet, shot the formation and bailed dry again. Rushing and others are arranging to make a drill stem test on No. 1 Lynn in Section 7-17-13, Champagnolle, at 3,296-3,309 feet after testing salt water at 3,216-22 feet, both depths being deeper than any production found in the east extension of the field. East Texas had one small gas well in the Waskom district of Harrison County, C. H. Lyons' No. 1 Saye, E. M. Jenkins Survey, made 500,000 feet at 2,382 feet total depth.

Daily Average Runs

Daily average runs from the field reversed the situation prevailing last week, showing an increase which almost balanced the decline registered during the preceding period. Of the 104,840 bbls. total daily average runs Louisiana districts ran 35,670 bbls., an increase of 615 bbls. but Arkansas' runs of 69,250 bbls. cut 80 bbls. off this increase. Daily average runs from the several pools were:

Louisiana	
Caddo, light	9,490
Caddo, heavy	3,225
Homer	3,875
Haynesville	4,990
DeSoto-Red River	3,460
Elm Grove	590
Bellevue	620
Cotton Valley	2,520
Urania	6,120
Pleasant Hill	530
Sarepta-Cartersville	250
Total	35,670
Arkansas	
El Dorado	4,565
Smackover, light	6,195
Smackover, heavy	47,640
Stephens	1,015
Nevada County	1,030
Lisbon	1,215
Champagnolle	7,420
Bradley	90
Total	69,170
Both states	104,840
Last week	104,305
Increase	535

(Continued on Page 127)

MANY INTERESTING DEVELOPMENTS IN LOUISIANA-ARKANSAS WILDCATS

By D. H. Bancroft

SHREVEPORT, La., July 15.—Monotony that has characterized wildcat activities for two or three weeks during which very little of more than passing interest took place, was broken during the past week in several instances. There were only two completions, both "no test," but a variety of things happened in drilling, testing and blocking. The two completions were L. C. Swope's No. 7 Fee, Section 18-9-1e, Grant Parish, west of the Little Creek district of LaSalle Parish, abandoned at 100 feet, where it had been shut down in litigation for several months, and W. J. Garnier, trustee's No. 1 Bowman-Hicks in Section 16-7-12, Sabine Parish, which had drilled to 700 feet and shut down.

W. G. Gray's No. 1 Snyder, Section 15-16-6, Bienville Parish, topped the Blossom at 2,826 feet and tested 90 joints of salt water in 14 feet of sand along with a little gas. Drilling through 51 feet of shale and gumbo it hit another sand at 2,877-88 feet, tested and got salt water again, and is shut down at 2,924 feet arranging to deepen for a test of the Woodbine.

Lide & Ford set 6-inch with packer at 950 feet on No. 1 Nabors in Section 32-12-11, DeSoto Parish, and tested salt water with a show of oil, lost the swab and are plugging back to 1,100 feet, total depth 1,250 feet. A. A. Fair made location for No. 1 Hamilton, 500 feet north and 300 feet west SE cor. SE SE, Section 1-12-13, on his block 4 miles east of Mansfield. One of the most interesting developments of the week came in Benedum & Trees Oil Co.'s No. 2 State, Section 22-14-12, in the Wallace Lake district, in which it was reported the Trinity was topped at 2,764 feet, several hundred feet high. The well had a show of gas with salt water at 2,617 feet, and is scheduled to go 4,000 feet. Another item of interest to the geologist interested in that locality is that the Fredericksburg and Ouachita both were missing on the log.

Joe Towery, of Shreveport, is assembling a block of 3,000 acres centering on the SW cor. Section 23-21-14, Caddo Parish, about 4 miles east of Pine Island production, for a well to go 2,500 feet, on which the geology indicates a "nose" from Pine Island structure extending east and west.

Jackson Parish

George O. Baird tested No. 1 Tremont in Section 24-16-1w, Jackson Parish, in 8 feet of sand, total depth 3,045 feet, and got 28 joints of mud with brackish water at the bottom and a slight show of gas and, while already low, is arranging for another test to go deeper in the event it doesn't show any better.

Tunica Petroleum Co. appears to have another small pumper in the White Sulphur district of LaSalle Parish, about 20 miles south and a little east of Little Creek production in the Urania district. It is No. 47 L.&A. in Section 17-7-2e, and is waiting on standard rig to pump from 7 feet of sand, total depth 808 feet. The company has completed three or four small pumpers in this vicinity, one from around 1,200 feet, and the others between 700 and 800 feet.

The surety company with which Rainbow Oil Co. was bonded to drill a well in Section 33-22-8, Morehouse Parish, 7 miles east of Gallion, has taken over the block and made a deal with D. M. Lide, of Shreveport, to drill the well. Derrick has been up on location since January, but most of the time the location has been under water, as it is in a swamp. The block consists of 3,000 acres and the well is to go 3,000 feet.

Benedum and Trees Oil Co. made location for the first well on its block, 15 miles southeast of Bull Bayou production, No. 1 Franklin Realty Co., 350 feet south and 350 feet east NW cor. Section 29-11-9.

Farish & Russell's deept test in Ouachita Parish, south of the Monroe Gas Field, No. 1 School, in Section 16-16-4,

(Continued on Page 126)

To Extend Humble Deep Development

Play to Be Started for 7,400-Foot Production Southeast of Jennings Field. New Dome Prospects Reported

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., July 15.—That the deep sand development south of the Humble Field will be extended to the west side of the dome and that a play will be started for the 7,400-foot production recently opened southeast of the Jennings Field were indicated in transactions made known the past week to Gulf Coast operators. A summary of the more important developments of the week concerning coastal fields included:

1. Purchase by the Sun Oil Co. of 1,200 acres in the Bender tract on the west side of Humble.

2. Appropriation of $250,000 by The Texas Company for deep sand development southeast of Jennings.

3. Leasing of a large block of acreage in the vicinity of Eureka just northwest of Houston chiefly by the Humble Oil & Refining Co. and Navarro Oil Co., who have recently completed a torsion balance survey which indicates the possible existence of another salt dome there.

4. Purchase by the Humble Oil & Refining Co. from the Rycade Oil Corp. of a half interest in the latter's Bayou Bouillon Field in St. Martin Parish, Louisiana.

5. An increase of over 5,000 bbls. in the daily average production of coastal fields for the week ending July 13.

Sun Oil Co.'s purchase of the Bender tract west of Humble involved a cash consideration of $50,000, it is reported, and contracts to drill at least two 5,500-foot tests in the immediate future. This company already had approximately 450 acres in the Bender tract giving the company a total of approximately 1,700 acres for deep sand development.

Considered Promising

This acreage is considered by coastal operators as among the most promising for deep production and should production be found it probably would mean the active drilling up of the Humble townsite as this would be in line with the indicated trend of development around the dome. This area is virtually virgin territory as what few tests have been drilled have been very shallow, drilled in an effort to extend the old shallow sand pool. The proving of a prolific deep pool on the south side of the dome, now one of the most active spots on the Gulf Coast, which recently has been extended 2,000 feet to the southwest around the dome, has been focusing more and more attention on possible further extensions to other sides of the dome, particularly the west.

The Texas Company, which, it was learned during the week, has just set aside a quarter million dollars for drilling at Jennings, will drill several deep tests on its acreage southeast of Jennings, near where the Yount Lee Oil Co. recently completed the Coast's deepest producer at a 7,400-foot level. Part of The Texas Company's acreage is within 600 feet of the Yount Lee Oil Co.'s well (No. 6 Houssierre-Latrielle), and, being in what may prove the line of production, promises interesting development.

The Texas Company has drilled a number of deep tests southeast of Jennings, but all have been closer into the dome, the deepest only going to about 5,100 feet. The deep producer is approximately 3,600 feet southeast of the field and between it and the dome and around to the south The Texas Company holds large blocks, both in the Houssiere-Latrielle and the Rayne heirs tracts.

Humble Oil & Refining Co. and Navarro Oil Co. early in the week blocked up considerable acreage near the town of Eureka, a few miles northwest of Houston, where the torsion balance indicated some unusual subsurface condition which might be another dome. These companies' acreage is situated around the John Taylor Survey.

The Eureka prospect is the sixth to be discovered by the torsion balance within a year within a few miles of Houston in Harris County, the others being Mykawa, Genoa, Clodine, Aldine and Deer Park (Strang). Although in none of these cases can it be definitely stated that a dome exists, the findings of the torsion balance in each were of sufficient importance to justify the blocking of acreage. On two of these, Mykawa and Genoa, drilling already is under way.

Announcement was made early in the week that Humble Oil & Refining Co. had completed a deal with Rycade Oil Corp., whereby it acquired a half interest in the latter's holdings at Bayou Bouillon, St. Martin Parish, Louisiana. By terms of the contract, Humble Oil & Refining Co. will put up a cash amount equal to that spent by the Rycade Oil Corp. to date at Bayou Bouillon for use in development of that dome. Following that expenditure the two companies will share equally in the costs of operation and in the returns.

Rycade Oil Corp. started drilling at Bayou Bouillon in the early part of 1928 and so far has completed six wells and abandoned nine tests. The discovery well, by far the best so far completed, as later operations have not been entirely favorable, came in for an initial of 4,000 bbls. at 3,044 feet. The majority of the other wells have been small or short lived.

Blue Lake Prospect

Another new torsion balance prospect has just come to light and it has been made known that the Union Sulphur Co., which has acquired the acreage, soon will start its first test. The prospect is situated in the vicinity of what is known as Blue Lake approximately 5 miles east of Orange between this town and Vinton in Calcasieu Parish, Louisiana. Calcasieu Parish has just been witnessing one of the most complete and thorough torsion balance surveys ever made on the Gulf Coast, with many companies checking the parish from one end to the other despite the fact that it has been checked over numerous times before.

Shell Petroleum Corp. is adding to the long list of wildcats getting under way in new coastal territory by making location for No. 1 Marceaux on the north bank of Mallard Bay in the extreme western part of Cameron Parish, and far in the swamps from civilization. The location is in the SW cor. SE Section 32-12s-3w. A canal is being dredged to the location before work can begin. This territory was "shot" by Shell several months ago and indications were given of another dome.

Some trading of acreage around The Texas Company's new field in the southwestern part of Orange County near Port Neches was recorded during the week. Alexander & Smith of Houston sold 114 acres in the Jacob Beaumont Survey to the Marland Production Co. for $14,000 cash and one-thirty-second overriding royalty. Southern Petroleum Co. assigned to Alexander & Smith 650 acres in the Susan Frazier Survey for $22,000 cash and a thirty-second overriding royalty.

Week's Completions

Although 22 oil producers were completed in coastal territory during the week, few were of special significance either by location or size. Of the few significant wells, Humble Oil & Refining Co.'s No. 4 Nelson at De Walt, Fort Bend County, extended the field approximately 800 feet to the south. The well flowed initially at the rate of 900 bbls. from sandy shale at 3,706 feet.

Rio Bravo Oil Co.'s No. 15-A Settegast on the southwest side of the Pierce Junction Dome was reported completed making dry gas, but since, with a decline in the gas pressure, is making oil, the initial 24-hour flow being estimated at 2,200 bbls. from the sand at 4,331 feet. Two other tests on the southwest, a pool which has been opened within the past few months, were in oil sands Saturday preparing to test. Pure Oil Co.'s No. 1 Herman estate is in a sand at 5,054-57 feet, a deep sand not reached by the other producers, this test having tested salt water at the 4,000-foot sand. Saxet Gas Co.'s No. 3 Herman has set casing at 4,289 feet to test an oil sand at a total depth of 4,313 feet.

Six wells were completed at Spindletop, adding better than 3,500 bbls. flush output to that field; one well was completed at Bayou Bouillon; three at Pierce Junction; one at Liberty; one at Blue Ridge; two oils wells and one gasser at Raccoon Bend; one well at Goose Creek; one at Sour Lake; two at Hull; one at Vinton, and two at Jennings. Three tests were abandoned.

Daily Average Production

Daily average production of Gulf Coast Fields for the week ending July 13 total 156,957 bbls., which was an increase of 5,070 bbls. over the preceding seven-day period. The increase was due almost entirely to substantial gains at Pierce Junction, Spindletop, Humble and Liberty. Figures by fields are:

GULF COAST PRODUCTION

Texas

Allen	8
Barbers Hill	8,164
Batson	1,238
Big Creek	4,645
Blue Ridge	3,409
Brenham	245
Boling	1,342
Clay Creek	2,710
Damon Mound	673
DeWalt	12,925
Fannette	0
Goose Creek	5,733
High Island	1,160
Hull	7,828
Humble	6,690
Jasper County	40
Markham	345
Nash	504
North Dayton	370
Orange	2,804
Orchard	53
Pierce Junction	19,136
Port Neches	510
Refugio	3,970
Raccoon Bend	6,610
Saratoga	933
Sour Lake	2,722
So. Liberty-So. Dayton	6,068
Spindletop	30,021
West Columbia	6,349
Total Texas Coast	137,205
Week ending July 6	131,282
Increase	5,923

South Louisiana

Anse La Butte	50
Bayou Bouillon	191
Black Bayou	115
Edgerly	746
Jennings	2,889
Hackberry	5,936
Lockport	3,425
Sorrento	43
Starks	412
Sulphur	1,675
Sweet Lake	48
Vinton	4,187
Welsh	35
Total South Louisiana	19,752
Week ending July 6	20,605
Decrease	853
Total Gulf Coast	156,957
Week ending July 6	151,887
Increase	5,070

GULF COAST FIELDS AND WILDCATS

Week Ended July 13

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Production Co.'s No. 3 Smith, east flank... Drlg. hard sand and lime 5,038 ft.
Mills Bennett Production Co.'s No. 2 Hamman ..... Drlg. lime 4828 ft.
Humphreys Corp.'s No. 8-A Kirby, east flank ..... Drlg. rock 4,374 ft.
Humphreys Corp.'s No. 1-H Kirby, east flank ..... Fishing drill pipe 4,868 ft.
Humphreys Corp.'s No. 2-H Kirby, east side ..... Drlg. gumbo 3,198 ft.
Humphreys Corp.'s No. 3-H Kirby, east side ..... Drlg. sand and lime 2,024 ft.
Humphreys Corp.'s No. 1 Tarbutton, east flank ..... Drlg. shale and lime 3,363 ft.
Humphreys Corp.'s No. 1 Illfrey, east flank ..... Drlg. hard sand and lime 4,169 ft.
Moody Corp.'s No. 1 Illfrey ..... Drlg. sand lime 3,390 ft.
Republic Production Co.'s No. 1 McKinney, south flank.. Reaming, total depth 4,852 ft.
Rexal Oil Co.'s No. 2 McLean, east flank ..... Drlg. lime 5,067 ft.
Rexal Oil Co.'s No. 3 McLean, east flank ..... Drlg. gumbo 1,450 ft.
Rexal Oil Co.'s No. 1 Smith, east flank ..... Drlg. hard sand 4,888 ft.
Rexal Oil Co.'s No. 1 Cockburn, east flank ..... Drlg. gumbo 3,053 ft.
Sun Oil Co.'s No. 3 Chambers, south flank ..... Rigged up.
Yount Lee Oil Co.'s No. 4 Chambers, southwest ..... Drlg. water sand 7,006 ft.
Yount Lee Oil Co.'s No. 7 Chambers, south ..... Drlg. gumbo 3,460 ft.
Yount Lee Oil Co.'s No. 1 Kirby, south side ..... Drlg. gumbo 3,464 ft.

BOLING—FORT BEND AND WHARTON

Sun Oil Co.'s No. 6 E. C. Farmer, east ..... Drlg. heaving shale 4,056 ft.
Sun Oil Co.'s No. 7 E. C. Farmer, east ..... Drlg. lime and sulphur 1,667 ft.
The Texas Company's No. 1 Bushnell, northeast ..... Rigging up to pump 4,224 ft.
The Texas Company's No. 2 Pleasants, northwest..... Drlg. hard sand and boulders 2,082 ft.
Vacuum Oil Co.'s No. 3 Taylor, south side ..... Drlg. lime 3,669 ft.

RACCOON BEND—AUSTIN COUNTY

Humble & Valley's No. 5 Hardy ..... Rig.
Humble & Valley's No. 3 Saunders ..... Comp. flowing 500 bbls. oil 3,500 ft.
Humble & Valley's No. 1 Buchanan ..... Comp. pumping 36 bbls. 3,570 ft.
Humble & Valley's No. 2 Buchanan ..... Drlg. shale 199 ft.
Humble & Valley's No. 1-B Mitchell ..... Waiting cement to set 3,434 ft.
Humble Oil & Refg. Co.'s No. 2-B Mitchell ..... Location.
Humble & Valley's No. 2 Stravoski ..... Drlg. dry shale 3,375 ft.
Humble & Valley's No. 1-B Koehn ..... Comp. blowing 12,000,000 ft. dry gas 1,021 ft.
Humble & Valley's No. 3 Walton ..... Drlg. sandy shale 2,030 ft.
Humble & Valley's No. 1-B Walton ..... Rig.
Humble & Valley's No. 4 Walton ..... Derrick.
Humble & Valley's No. 4 Thompson ..... Drlg. shale and shell 3,114 ft.
Humble & Valley's No. 3 Dietrichs ..... Drlg. sand and shale 3,235 ft.
Humble & Valley's No. 4 Dietrichs ..... Location.
Humble & Valley's No. 1 Jackson ..... Drlg. sand and shale 3,093 ft.
Humble & Valley's No. 1 Mahnki ..... Waiting cement to set 1,021 ft.
Humble & Valley's No. 4 Austin College ..... Waiting cement to set 1,209 ft.
Humble & Valley's No. 1 Graneau ..... Location.
Humble & Valley's No. 2 Bellville School ..... Waiting cement to set 1,206 ft.
Humble & Valley's No. 2 Woodley ..... Drlg. sandy shale 310 ft.
Humble & Valley's No. 2 Mueller ..... Drlg. sand and shale 2,132 ft.
Humble & Valley's No. 2-A Grawunder ..... Derrick.

(Continued on Page 130)

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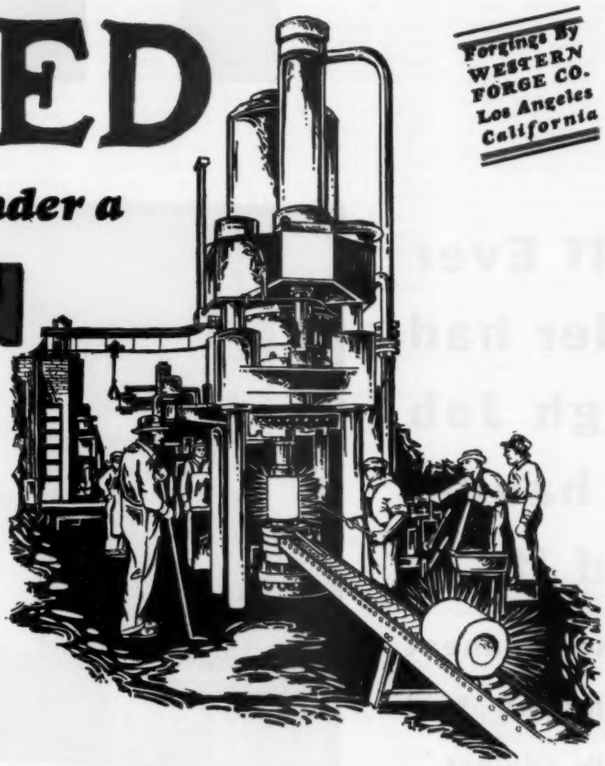

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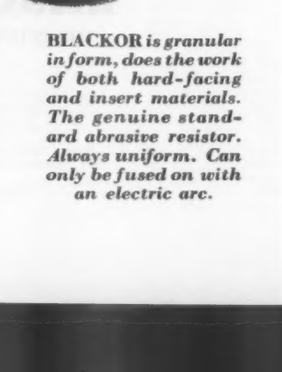

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Darst Survey Test Holding Attention

Southwest Texas Awaiting Final Verdict on Well of The Texas Company When Carried to Edwards

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., July 15.—Southwest Texas is waiting the final results of The Texas Company's No. 1 Dallas Wilson, Guadalupe County, north central part of Jacob C. Darst Survey. Last depth and news available was 2,405 feet where it cored the Eagleford after bailing about 5 bbls. of oil from the Austin chalk. Two hundred more feet should carry it into the Edwards lime and a final verdict was expected to be reached early this week, possibly Sunday. Similarity of conditions to those in the Joe Bruner Field was causing unusual excitement with no leases moving close in since they are all held by major companies. Seguin and Luling are jammed with oil men who have come to see the final test. Everything was in the favor of the test down to the top of the Eagleford. The whole matter hinges on what it will do when it hits the Edwards lime. Tests have had equally favorable conditions before now and have been dry holes. The displacement of the fault is probably considerably greater than in the Joe Bruner Field. In the Bruner Field, at the greatest point the displacement is about 375 feet and in the case of the Darst Creek area, which is the name given to the new proposition, the displacement may prove as much as 500 feet. The greater the displacement the better the chance for big production.

Effect of the excitement over the No. 1 Dallas Wilson is not confined to the Darst Creek area, since the finding of this structure has sent the wildcatters into the woods around that part of Texas to find others. There are some known structures and fault lines in that part of Guadalupe County that have been proven by dry holes but have not been condemned as to production and it is going to be a little easier to finance the drilling of blocks in that part of the country.

Including The Texas Company block of leases there are eight lease blocks now in the southern part of Guadalupe County that lie in the same general trend with the old Luling and the new Joe Bruner Field. Bob Penn has one block lying directly between the Darst Creek area and the Joe Bruner Field. Tidal has a block several miles southwest of the Darst Creek proposition and Sinclair Oil & Gas Co. has spudded in its test on the southwest edge of Guadalupe County.

Northeast of Bruner

Excitement over the Darst Creek test also attracts attention to John T. Callahan's No. 1 W. Ellison, a couple of miles northeast of the Joe Bruner Field, shut down according to last reports at 550 feet to repair boiler. This is the only test northeast of the Bruner Field being made at this time excepting 20 miles or more northeast where there are some tests in Bastrop County. If the axis of the old Luling and the new Joe Bruner Field were extended to the northeast about 20 miles they would come together at a point a little northeast of the Dale Field. From the Dale Field southwest for a distance of 4 or 5 miles was pretty well punched full of holes a few years ago at the time the Dale Pool was discovered but from there to the Joe Bruner Field there is a gap of 6 or 7 miles that has scarcely been touched and John T. Callahan is drilling his No. 1 Ellison in that gap. Hence the only other chance of picking up another fault proposition northeast in the same general trend with the Joe Bruner Field is northeast of the Dale Pool which carries it about 20 miles northeast of the Bruner Field into Bastrop County. There is quite a little activity there in the eastern part of Bastrop and in fact extending still farther northeast into Milam County.

Laredo District

There are a number of things worth watching in the Laredo district and one is a deep test the Magnolia Petroleum Co. is making in the Schoolfield-O'Byrne Pool in Duval County. The test is the No. 7-B Hahl, the farthest north location in the pool. It was a salt water well in the producing sand at 2,337-39 feet and is now standing at 3,740 feet while changing to a heavier rig. It seems to be the policy of the Magnolia Petroleum Co. in the Laredo district at least, when it gets a dry hole in the producing sand to carry the test on down. It has done this in a number of instances in other pools.

In the Carolina-Texas Pool in Webb County, Carolina-Texas Oil & Gas Trust's No. 7 Benavides, SE NE Survey 683, at 2,596 feet is an 18,000,000-foot gas well with 600 pounds rock pressure. It is an offset to a well by The Texas Company 300 feet south of it. It is understood that the Carolina-Texas Oil & Gas Trust will now go back to one of its tests in the north part of the survey which has been standing at 3,000 feet and drill it down as far as it will go to see what the deeper sands have to offer.

O. W. Killam completed his No. 14 Cuellar in the new pool in Zapata County for 50 bbls., at 1,476 feet with sand topped at 1,472 feet. G. M. Partee and associates completed their No. 4 Moody for 125 bbls. in the Schoolfield-O'Byrne Pool at 2,358-61 feet, and Magnolia Petroleum Co. completed its No. 3 Hahl in the same pool for 75 bbls. in sand at 2,344-46 feet. Six new locations were announced in the Laredo district, two in the gas area north of the Mag-Cole oil pool in Webb County, one of which is by J. J. O'Hern and one by Magnolia Petroleum Co. Two new locations were announced in the Jennings area in Zapata County, one new location by T. J. Conway in the area south of the Randado Pool and one by W. R. Shankle on Holbien land northeast of the Henne-Winch-Fariss Pool in Jim Hogg County.

H. Muckelroy, Jr., is down 1,000 feet in his No. 2 Trevino, his first test since he completed No. 1 Trevino at 1,408 feet a few weeks ago and opened a new oil pool in Zapata County east of the Jennings gas pool and south of the pool discovered last year by O. W. Killam on the Cuellar land.

Sun Oil Co. is down 2,530 feet in its No. 1 Lopez in Duval County in the north part of Survey 730 and about 1½ miles southwest of the five small oil wells of the Humble Oil & Refining Co. producing at around 2,800 feet and located in a group in the corners of Surveys 405, 400, 165 and 401. Another week should tell the tale of the Sun's test as to the 2,800-foot stuff.

South of the Randado Pool Magnolia Petroleum Co. is down 3,400 feet in its No. 42 Merchant State Bank near the center of the west line of Survey 235, and about a mile south of the Randado Pool. One mile or so east of it T. J. Conway is starting his No. 2 Leyendecker, his third test in that area. His No. 2 Leyendecker, abandoned last week, it is figured was too far to the east. Sands that produced in the Randado Pool were absent or nearly so in this test and should be present farther to the west.

Corpus Christi Area

Completions were not numerous in the coast territory last week nor anywhere else in Southwest Texas. It was a dry week in that regard. Humble Oil & Refining Co. completed its first core test in the block of leases it has in the northern part of Goliad County. In the Kingsville Field the Humble Oil & Refining Co.'s No. 4 Flato is down 6,100 feet and repairing the rig. It is already deeper than anything that has ever been drilled in the territory around Corpus Christi and the second test in Southwest Texas to go below 6,000 feet, not counting the two tests in the Luling Field drilled by the North & South to below 7,000 feet. The other 6,000-foot test was by the Magnolia Petroleum Co. in Val Verde County.

In Nueces County Spencer & Rhodes have spudded in a test on land owned by The Texas Company in fee on the south side of Nueces Bay. Quite a number of coast tests have been rebuilding derricks demolished or damaged by a recent storm. The B. F. Thompson No. 1 Thomas in Calhoun County, which was to have resumed drilling, had its derrick entirely wrecked and was delayed to rebuild it.

For the next few months more attention in the coast will be given to using geophysics than anything else. Some major companies, it is understood, propose to play the coast country as far as Brownsville. One test is being drilled on the Mexican side of the Rio Grande and some additional activity is threatening to break loose over there. The coast from Corpus Christi to Brownsville is nearly as level as a barn floor and the only kind of geology to work is geophysics.

Southwest Texas Production

Branyon	12
Bruner	47,934
Dale	466
Gonzales	82
Kingsville	249
Larremore	162
Luling	11,269
Lytton Springs	994
McMullen County	70
Medina County	32
Mirando	11,018
Somerset	1,934
Yoast	1,011
Total	75,233
Week ending July 6	76,189
Decrease	956

Luling Area

Outside of the activity in the Bruner Field and the Darst Creek area and in Bastrop mentioned above there is some interesting activity in the counties next to the southeast. In Fayette County, National Oil Co. has started its second test on a block of leases and has set surface casing. The test is southwest of Lagrange a short distance. The northwest edges of Fayette and Gonzales Counties are getting a good play.

W. J. Kelly is changing to a heavier rig in his No. 1 Burke in southwestern Fayette. Magnolia Petroleum Co. has rigged up on its No. 1 Henry Gully. In northern Gonzales Joe Bruner's No. 1 Miller is standing at 2,712 feet and moving in a heavier boiler and P. A. Hoffman's No. 1 Borrer in the James Stewart Survey near the Caldwell County line has started drilling. This was first reported as No. 1 Stewart. There is some question whether it is in Caldwell or Gonzales County, it is so near the line.

Milam County

After some days delay due to extra heavy rains there has been a marked resumption of activities in Milam and Williamson Counties in the Thrall-Thorndale territory. J. M. Burkhead's No. 1 Weighman in the A. Pollard Survey topped the chalk at 1,100 feet and the Buda at 1,676 feet and went out of the Buda at 1,721 feet. At last reports they were in the Del Rio and with the chalk high they are estimating the fault displacement at about 200 to 300 feet which is ample for getting a good producing well in the Edwards lime if the well is located right and there is any oil in the Edwards. For the next few days this test will be watched with interest. H. E. Elliott and associates will probably have to skid their derrick and try again. Theirs is the No. 1 J. C. Moore. They had cored the top of the Buda and are said to have had a little showing of oil. A loose boulder caused trouble and they attempted to get by it but failed up to last reports.

E. L. Chapman, who is drilling No. 1 E. G. Knight, got the chalk at a little below 1,400 feet and is going good thus far. This test is a quarter of a mile

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WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ATASCOSA COUNTY

Tom Draper's No. 1 McCoy, Sur. 234 ..... Location.
Amphion Oil Co.'s No. 1 Sam Schlisser ..... Shut down 2,300 ft.; repairing rig.

BASTROP COUNTY

Gypsy Oil Producing Co.'s No. 1 Lottman estate ..... Drlg. 2,567 ft.
Gulf Production Co.'s No. 2 Bell, Riley Sur. ..... Location.
Jim Harper and others' No. 1 R. R. Mitchell ..... Location.
Howell Oil Corp.'s No. 1 F. Wichman ..... Drlg. 1,450 ft.
Humble Oil & Refining Co.'s No. 1 B. Haywood ..... Location.
Moore & Ortman's No. 1 Ortman, Andrew Graham Sur. ..Location.
E. W. Ogden's No. 2 M. M. McCall, Stephen F. Austin Sur..Stuck drill stem 2,912 ft.
Frank Rundis' No. 1 fee ..... Drlg. 700 ft.

BEXAR COUNTY

Balcones Oil Corp.'s No. 1 F. A. Jackle ..... Topped Anacacho 1,540 ft.
Indian Creek Oil & Gas Co.'s No. 1 W. Wolfsohl ..... Running casing 1,597 ft.
Moore-Jauer's No. 1 Holly R. Ellison ..... Drlg. 1,370 ft.; showing some gas in Glenrose.
J. Morgan Russell's No. 1 G. A. C. Halff ..... Setting casing 20 ft.
E. G. Potter's No. 1 Watson, B. Martinez Sur. ..... Drlg. 1,488 ft.

BLANCO COUNTY

J. E. Forbes and others' No. 1 E. Bruckner ..... Drlg. 200 ft.
Sam Hohenstein & P. H. Burtner's No. 1 T. Beauchamp..Location
Albert Moursund's ..... Location
W. W. Rains and others' No. 1, Survey 310 ..... Location
Robt. A. Rodson's No. 1 Glasscock ..... Waiting on casing 962 ft.

BROOKS COUNTY

Milam Drlg. Co.'s No. 4 Riley Allen ..... Formation test, spudded.
A. W. Dinn's No. 1 J. G. Ramas, Block 5 ..... Drlg. 400 ft.
A. W. Dinn's No. 1-B Garcia ..... Waiting on fuel 450 ft.
A. W. Dinn's No. 1 Salado, Block 5 ..... Location.
Houston Oil Co. of Texas' No. 1 Lassiter, Survey 69..... Drlg. 2,500 ft.

CALDWELL COUNTY

H. C. Ratcliff's No. 1 J. E. Cardwell, J. F. Bell Survey...Location.
John T. Callahan and others' No. 1 W. Ellison ..... S.D. 550 ft; repairing boiler.
M. O. Rayor's No. 1 J. Keefer ..... Rigged up.
Russell's No. 1 Hill, McCullough Survey ..... Standing 547 ft.
Whittington and others' No. 1 J. G. Horner ..... Standing 1,320 ft.

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Sulphur Showing in New Mexico Wells

La Barge Field, Wyoming, Has 240-Bbl. Well. Wertz Dome, Carbon County, Has 40,000,000-Foot Gas Completion

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., July 13.—Two wells in southeastern New Mexico showed sulphur water this week, and a third one is making 15,000,000 feet of gas. The water appeared in the Texas Production Co.'s No. 1 Humphreys, in Lea County, at 3,105 feet, and the well is shut down for orders. The Midwest Refining Co.'s No. 31 Lane, in Eddy County, had a small quantity of water at 1,800 feet. The Midwest's No. 22 Gregory, in the Jal district, is making 15,000,000 feet of gas at 3,070 feet. Cranfill & Reynolds' No. 1 Meyer, 5½ miles north of its No. 1 Wilson, had a show of 1,000,000 feet of gas at 3,175 feet. The Vacuum Oil Co.'s No. 1 State, which has been making 125 bbls. a day, is to be drilled deeper.

The Marland Oil Co.'s Pennsylvanian test at Pipe Springs, in Bent County, Colorado, has penetrated the hard formation which resembled granite and is back in lime and shale. The Five Square Oil & Gas Co.'s No. 1 State at Berthoud, in Larimer County, was drilled 11 feet deeper and showed some increase in the quantity of oil.

A 240-bbl. well in the La Barge Field for the California Petroleum Corp., and a 40,000,000-foot gasser on the Wertz Dome in Carbon County, for the Producers & Refiners Corp., were the principal developments in Wyoming. Two new wells are being started at Oregon Basin by Charles E. Orchard and the Ohio Oil Co., and that field is now supplying crude for the new refinery opened at Billings by the Yale Oil Corp. of South Dakota.

NEW MEXICO

Lea County, southeastern New Mexico, reported no outstanding developments for the week. Discouraging news was received from the Texas Production Co.'s No. 1 Humphreys, NE co. SW, Section 18-20-32, near the center of the western boundary of the county and 12 miles east of the Twin Mounds Pool in Eddy County, that it had 200 feet of sulphur water in the hole at 3,105 feet, and is shut down for orders. The Empire Gas & Fuel Co.'s No. 2-B State, NW SW SE, Section 8-21-35, in the San Simion district, three-fourths of a mile south and east of the same company's No. 1 State, which was completed last year for around 200 bbls. of fluid a day, half of which was oil, was drilled to 4,500 feet and will be plugged. It had a hole full of sulphur water. The Midwest Refining Co.'s No. 22 Gregory, NW SE SW, Section 31-25-37, in the Jal district, 2 miles southeast of the Skelly Oil Co.'s No. 1 Joyner, and 2½ miles south of Marland's No. 1 Sholes, a gasser, is bottomed at 3,070 feet and moving back the boilers. It is making approximately 15,000,000 feet of gas and will go deeper. The Vacuum Oil Co.'s No. 1 State, center west line, Section 13-17-34, about the middle of the county, which has been making 125 bbls. a day from a total depth of 3,170 feet, has pulled the tubing and will be drilled deeper in an effort to increase the flow of oil. Cranfill & Reynolds' No. 1 Meyer, NE cor. SE, Section 22-24-36, 5½ miles north of its No. 1 Wilson, is drilling at 3,206 feet in lime and had 1,000,000 feet of gas, estimated, at 3,175 feet.

Routine operations include the following: The Humble Oil & Refining Co.'s No. 1 Lindley, C NE NE, Section 23-25-36, Jal district, an offset to Cranfill & Reynolds' No. 1 Wilson, cemented the 10-inch at 2,965 feet, and is waiting for the cement to harden. The Magnolia Petroleum Co.'s No. 1 Lindley, SE cor. NE, Section 26-25-36, an offset to Skelly's No. 1 Joyner, commenced spudding July 3, and is drilling at 100 feet in red rock, and the Gypsy Oil Co.'s No. 1 Huhphreys, NW cor. SW, Section 25-25-36, another offset to No. 1 Joyner, is drilling at 3,075 feet in anhydrite. The Texas Production Co.'s No. 1 Shepherd, SE cor. NE, Section 6-26-37, is shut down at 3,240 feet for rig repairs, and the Marland Oil Co.'s No. 1 McCallister, SW cor. SE, Section 24-26-36, is drilling below 1,200 feet.

Pearl District

Henderson, Dexter & Blair's No. 1 McDonald & Jewett, SE cor. Section 18-20-34, in the Pearl district, is pumping daylight from a total depth of 3,575 feet and averaging 60 bbls. of oil and 10 bbls. of water. This is a slight increase in the water, which last week was reported averaging 7 bbls. a day. The Empire Gas & Fuel Co.'s No. 1 Martin, SW. cor. NE, Section 28-30-32, is drilling at 3,555 feet in brown lime, and Joe Cook and others' No. 1 State, NW NE Section 12-21-33, is drilling below 1,000 feet. Cranfill & Reynolds' No. 1-B State, NE cor. Section 2-21-33, is drilling at 1,600 feet in red shale, and the Ohio Oil Co.'s No. 1 McGeorge, SE NW Section 30-20-33, is drilling at 800 feet. The Marland Oil Co.'s No. 1 Flint, SE. cor. Section 28-20-34, San Simone district, is drilling at 2,600 feet. The Midwest Refining Co.'s No. 31 Capps, SW cor. Section 3-19-38, in the Hobbs district, is drilling at 3,580 feet in lime and anhydrite. Henry Walker and others' No. 1 Terry, SW SE Section 10-19-38, is drilling at 1,510 feet in red rock. The Humble Oil & Refining Co.'s No. 1 Bowers, C NE SE, Section 30-15-58, is drilling at 1,385 feet in red rock, and the Rector Oil Co.'s No. 1 King, NE NE Section 26-25-32, is drilling at 1,800 feet in salt. The Empire Gas & Fuel Co.'s No. 1 Closson, NW SE, Section 6-22-36, cemented the 8¼-inch at 3,295 feet and is waiting, and the Texas & Pacific Coal & Coal Co.'s No. 2 State, NW cor. SW, Section 21-23-36, is drilling at 420 feet in red shale.

Eddy County

In Eddy County, the Midwest Refining Co.'s No. 31 Lane, SW cor. Section 28-19-30, 6 miles northeast of the Twin Mounds Pool, encountered sulphur water at 1,755-1,800 feet, and is drilling at 1,815 feet. The Grayburg Oil Co.'s No. 2 Burch, C NW SW, Section 19-17-30, northeast of the Artesia Pool, is on production at a total depth of 3,142 feet. While production figures are not yet available, the well was estimated good for 250 bbls. Leonard & Lever's No. 1 State, NW cor. Section 19-20-30, is drilling below 1,000 feet, and Flynn, Welch & Yates' No. 2 Gissler, SE SW Section 12-17-30, is drilling at 2,900 feet. The Pueblo Oil Co.'s No. 4 Russell, NW cor. Section 18-17-31, is drilling at 2,000 feet, and its No. 1 Lee, NE cor. Section 34-17-29, is drilling at 2,300 feet.

In De Baca County, the Matador Oil Co.'s No. 1 Wood, SW SW Section 6-4n-20, is drilling at 2,184 feet, and the Transcontinental Oil Co.'s No. 1 McWhorter, SW NW, Section 6-3s-22, cemented at 4,210-4,308 to stop caving, and is drilling out plug.

UTAH

The Continental Oil Co.'s No. 1 Boundary Butte, Section 22-43-22, San Juan County, southeastern Utah, continues to make new hole slowly and at last reports was drilling at 5,272 feet with no important change since an increase in the flow of gas took place last week at 5,260 feet. In Wayne County, the Phillips Petroleum Co.'s No. 1 Shick, Section 16-27-16, ran into more water after cementing the 6⅝-inch at 4,985 feet, and is bottomed at 5,015 feet and underreaming and lowering pipe. The Maude Ellen Oil Co.'s No. 1, Section 28-3s-21, Uintah County, is drilling at 1,600 feet in lime. The Boulder Knoll Oil & Gas Co.'s No. 1 Endter, Section 17-34-25, San Juan County, had a crooked hole after drilling was resumed below the 6¼-inch, cemented at 2,640 feet and plugged back to that depth to straighten. The Western Crude Oil Co.'s No. 1, Section 4-20-23, Cisco Springs Dome, Grand County, cemented the 10-inch at 100 feet to shut off surface water.

COLORADO

The Rocky Mountain properties of the Continental Oil Co. are being inspected by the officials of the new company formed to take over the Marland Oil Co. and the Continental Oil Co. of Maine. The party, which is headed by President Daniel J. Moran, is traveling in a 30-passenger motor bus, and the territory included in the itinerary extends from Kansas City to Salt Lake City, and from Pecos, Texas, to Great Falls, Montana. The trip will take three weeks to complete. President Moran, while in Denver, took occasion to deny reports of a merger with the Tide Water Associated Oil Co., though he added that the program of the company will be one of continual expansion. It also was revealed that the company has commenced some drilling operations in Austria. It was stated that the Denver offices will be operated in the future about the same as in the past, and that there will be no reduction in the staff here.

Those in the party are. D. J. Moran, president; E. T. Wilson, chairman of the board; Fred Searles, director; S. H. Keoughan, chairman of the executive committee; E. J. Nicklos, vice president in charge of production; Walter Miller, vice president in charge of manufacturing; E. S. Karstadt, vice president in charge of marketing; W. H. Ferguson, executive vice president; B. H. Markham, comptroller; J. J. Cosgrove, general counsel; O. B. Lloyd, sales; Harry Moreland, pipe line; Tom Kenney, pipe line; E. O. Bennett, chief engineer; G. C. Clark, geologist; J. M. Hollister, general manager of plants and equipment; H. B. Simcox, production; E. C. Halsey, manager of service stations; J. S. Curtis, southern sales manager; Emerson G. Smith, supervisor of publications; T. D. Harris, motor transportation; S. J. Trilling, secretary, and John L. Wilson, representative of the truck company.

Drilling operations in Colorado developed no outstanding features during the week. The Five Square Oil & Gas Co.'s No. 1-A State, SW cor. Section 16-4n-69, on the Berthoud Dome in Larimer County, which has been showing oil for several weeks, has been cleared of tools and deepened 11 feet to 3,741 feet. The oil is reported to have shown some increase and to be standing 3,000 feet in the hole. Operations have been suspended until a 1,000-bbl. storage tank can be erected.

The Marland Co.'s No. 1 Pipe Springs, NE cor. SE, Section 27-27-49, in Bent County, southeastern Colorado, which last week looked rather discouraging when it cut a very hard formation that some took to be granite, is showing up much better. It is reported to have penetrated the hard formation and to have gone back into lime and shale at 4,350 feet. This is considered a rather im-

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TURNER VALLEY PRODUCTION SHOWS INCREASE OF 3,820 BBLS. OVER MAY

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, July 15.—Official figures of the production from the Turner Valley Field for June show a total of 92,122 bbls., an increase of 3,820 bbls. over May, when the production was 88,302 bbls. The June production included 64,759 bbls. of crude naphtha and 19,173 bbls. of light crude oil delivered to Imperial Oil, Ltd., and 8,200 bbls. practically all light crude, delivered to the Regal refinery at Calgary. The June figure of 92,122 establishes a new record. Increases have been continuous since January, 1929, and from March to June every month has established a new production record.

Increased production in June was largely due to the two Home Oil Co. producers in the south end, which showed a gain of 7,682 bbls. over May. Okalta's No. 1 in the central area, also showed an increase of 1,766 bbls. On the other hand, several of the Royalite Oil Co. producers in the central area showed a decline, including Royalite's No. 4, which dropped 2,941 bbls., and Royalite's No. 18, down 998 bbls. Dalhousie's No. 1, which in May produced 108 bbls. a day, in June showed only 276 bbls for the month, due to freezing. Other declines were due to seasonal conditions, the hot weather causing greater evaporation of naphtha with poorer recovery conditions and lessened production.

June Production

Detailed figures for the various wells for June are as follows:

Crude Naphtha Deliveries to Imperial Oil, Ltd.

Well	June Production	Daily Average
Royalite's No. 4	11,220	374
Royalite's No. 7	2,425	81
Royalite's No. 8	5,601	187
Royalite's No. 9	282	9
Royalite's No. 13	124	4
Royalite's No. 14	501	17
Royalite's No. 17	6,082	203
Royalite's No. 18	3,597	120
Dalhousie's No. 1	276	9
Dalhousie's No. 6	521	17
Home's Nos. 1 and 2	30,554	1,017
Illinois-Alberta's No. 1	1,652	55
Regent's No. 1	1,914	64
Light Crude, Imperial Refinery		
Royalite's No. 10	137	5
Royalite's No. 11	186	6
Royalite's No. 15	218	7
Royalite's No. 17	55	2
Royalite's No. 18	300	10
Royalite's No. 20	557	19
Royalie's No. 21	386	13
Dalhousie's No. 5	1,196	40
Foothills' No. 1	2,309	77
Home's No. 2	3,329	111
Okalta's No. 1	10,500	350
Regal Refineries, All Deliveries		
New McDougall Segur wells	1,571	52
McLeod wells	4,614	151
Spooner's No. 1	1,085	36
United Oils' No. 4	587	20
Vulcan Oils' No. 1	339	11

The June total of 92,122 bbls. gives a

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IDEAL
DOUBLE REDUCTION PUMPING GEAR

Type C-1

THE
NATIONAL SUPPLY
COMPANIES

Santa Fe Springs Monopolizes Stage

Aggressive Deep Zone Exploration Likely to Continue for Rest of the Year. Talk of 9,000-Foot Level

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 13.—Santa Fe Springs continued to monopolize the spotlight during the past week and this field should continue to be the center of interest for many months to come as development work is expected to continue at a relatively high rate for the rest of this year and into 1930. Deep-zone exploitation has been especially successful at Santa Fe Springs but development of the lower horizon is really just getting started. When the significance of Miocene production at Long Beach was recognized more than a year ago the opinion was ventured that similar production might be anticipated at Santa Fe Springs down to 8,000 and possibly 9,000 feet. The 8,000-foot level has already been exceeded at Santa Fe Springs and the 9,000-foot level is possible of attainment if and when drilling equipment can develop that depth with certainty. The Miocene contact at Santa Fe Springs has not been definitely established but it is generally agreed that the Buckbee and Nordstrum zones, which have already undergone intensive development, are of Pliocene age.

The productive Miocene formation at Long Beach extended down from approximately 5,500 feet to about 8,000 feet and it is probable a similar 2,500-foot thickness of Miocene may be anticipated at Santa Fe Springs. This would place the bottom of the possibly productive Miocene in this field somewhere around 9,000 feet and deeper if the O'Connell zone is of Pliocene age. It might not be amiss to mention that geologists and petroleum engineers were almost unanimous in their opinion that the Miocene production which was being developed at Long Beach could also be anticipated at Santa Fe Springs. This opinion was prevalent long before the Wilshire Oil Co. undertook its deep-zone exploration and subsequently confirmed existing opinion. Operators were so certain deeper production would be developed below the Meyer zone at Santa Fe Springs a concerted attempt was made to retard this drilling. George F. Getty complied with the insistent demand of marketers but unluckily the Wilshire Oil Co. could not do likewise because several leases had been acquired with this idea in mind and the company was obligated to prosecute deep-zone exploration or suffer a severe financial loss.

Unusually substantial production is anticipated when aggressive development work extends down into the Clarke zone. This horizon has not even been scratched except around the edge of the field. On the apex of the structure this zone should yield prolific production and afford a much thicker penetration than has yet been shown by any well. It is extremely difficult to definitely establish the bottom of the O'Connell zone and the exact top of the Clarke horizon on top of the structure as these two zones are practically continuous with no intermediate water with only a few inches of poker chip shale as a definite marker. This is clearly indicated by the fact that two or three wells have taken in 50 feet or more of the so-called upper part of the Clarke zone in addition to the normal penetration in the overlying O'Connell.

Exception has been taken several times in the past to the distinction made between the O'Connell zone and the so-called upper and lower part of the Clarke and I believe the sand now referred to as the upper Clarke zone will ultimately be found to be a component part of the O'Connell horizon on top of the structure.

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	566,045	2,456,922
Fuel oil	.....	.....	.....	.....	49,950	111,621
Diesel and gas oil	.....	.....	.....	.....	913,200	1,079,827
Gasoline	230,897	32,985	162,321	13,189	10,768,217	6,627,323
Naphtha distillate	.....	.....	.....	.....	81,750	76,500
Coastwise—						
Crude oil	643,279	91,897	377,707	53,958	12,448,695	12,514,194
Fuel oil	312,438	44,634	299,254	42,751	11,494,650	9,193,399
Diesel and gas oil	18,033	2,576	.....	.....	692,340	682,977
Gasoline	137,378	19,625	191,722	27,389	5,575,697	3,871,694
Kerosene	2,185	312	.....	.....	38,157	50,903
Naphtha distillate	.....	.....	.....	.....	.....	171,566
Exports—						
Crude oil	2,150	307	245,248	35,035	2,809,650	1,316,385
Fuel oil	228,720	32,674	691,333	98,762	10,147,934	13,341,133
Diesel and gas oil	.....	.....	9,699	1,386	1,463,609	1,464,506
Gasoline	104,726	14,961	146,954	20,993	5,657,387	3,099,849
Kerosene	.....	.....	166,128	23,733	1,629,108	2,323,064

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Diesel and gas oil	.....	.....	.....	.....	.....	242,425
Gasoline	78,059	11,151	60,586	8,655	1,189,377	1,279,497
Lubricants	.....	.....	69,172	9,882	69,172	208,024
Coastwise—						
Fuel oil	64,173	9,168	125,118	17,874	1,422,512	2,315,808
Diesel and gas oil	.....	.....	27,690	3,956	317,460	161,051
Gasoline	117,140	16,734	152,129	21,733	2,659,464	2,471,537
Kerosene	15,063	2,152	6,790	970	75,313	155,752
Exports—						
Crude oil	.....	.....	.....	.....	121,603	79,199
Fuel oil	.....	.....	139,692	19,956	395,731	1,447,826
Diesel and gas oil	.....	.....	.....	.....	155,474	16,400
Gasoline	.....	.....	67,850	9,693	3,005,499	2,582,381
Kerosene	.....	.....	.....	.....	382,417	362,853
Lubricants	.....	.....	.....	.....	21,599	11,400

Wells around the edge of the field have developed production in fingers of the O'Connell zone and this sand was forthwith designated as the upper Clarke, a new horizon. It might be mentioned that there is no water between the O'Connell zone and the sand now referred to as the upper Clarke near the apex of the structure. The Clarke zone at present has been split into three divisions and is designated as the upper Clarke, the lower Clarke and the third Clarke zone. This classification is subject to revision as very little is known with regard to subsurface conditions on the apex of the structure. It is probable the present sand referred to as the lower Clarke is in reality the upper Clarke on top of the structure since there is a definite shale break overlying it. Another shale break exists beneath it and therefore establishes it as a separate and distinct zone.

Santa Fe Springs Operations

Drilling operations at Santa Fe Springs resulted in the completion of 10 wells during the week and another large list is expected during the coming week as there are quite a number of wells already in the pay. The next three or four weeks should witness the completion of a large number of new wells in the deep zone as there are approximately 40 projects scheduled for completion within 30 days if normal footage is made. The Texas Company, which has experienced exceptional success in deep-zone development at Santa Fe Springs, chalked up another large producer a few days ago when No. 5 Wickman, a new well, was brought in flowing 9,280 bbls. and 6,200,000 feet of wet gas daily from the O'Connell zone at 6,838 feet. The Bandini Petroleum, a subsidiary of the Wilshire Oil Co., also finished a substantial producer this week. This was No. 17 Off, which came in under a natural flow doing 7,285 bbls. and 7,600,000 feet of saturated gas daily from 6,880 feet. No. 16 Off, another Bandini well, blew in prematurely flowing at the rate of 2,000 bbls. a day from 6,450 feet but it was subsequently killed to take a larger penetration. No. 14 Off, which came in as a substantial producer last week, went to water a short time after completion and it has been recemented. The Commodore Oil Co., another subsidiary of the Wilshire, successfully completed No. 3 Landle and this new well is flowing 5,300 bbls. of 34.6 gravity oil daily from the O'Connell zone.

The Shell Oil Co. has just closed a busy week, during which three new wells were put on production. These were Nos. 17 and 18 on the Golay lease and No. 16 Slusher, a Clarke zone completion flowing 1,960 bbls. of 34.6 gravity oil and 2,000,000 feet of gas daily from 6,889 feet. Nos. 17 and 18 on the G.H. &N. (Golay) lease registered initials of 1,250 bbls. and 1,160 bbls. from the O'Connell zone at 6,480 feet and 6,522 feet, respectively. The Union Oil Co. finished No. 34 Bell, a new well doing 3,950 bbls. and 3,200,000 feet of gas daily from the O'Connell zone at 6,850 feet but production subsequently built up to 5,800 bbls., and will probably register a further gain after it has been on production for a few days longer. No. 43 Bell, which registered an initial daily production of 3,000 bbls. a day early last week, has subsequently built up to 8,840 bbls. and has apparently not yet reached its maximum. The General Petroleum, which has a large number of potential producers nearing completion, finished No. 186-G Santa Fe flowing 1,760 bbls. of 34.3 gravity oil and 1,600,000 feet of natural gas daily from the O'Connell zone at 6,437 feet. The Co-Operative Oil Syndicate chalked up a substantial producer by completing No. 2 Santa Fe flowing 6,180 bbls. of 35.1 gravity oil and 5,700,000 feet of natural gas daily from the O'Connell horizon at 6,100 feet. The Cypress Petroleum's No. 2 Wardman was another good well finished as it showed an initial of 5,585 bbls. daily from the O'Connell zone at 6,800 feet.

New Summerland Sand

The Summerland Field of Santa Barbara County, where production has been secured out in the open ocean for a number of years, is expected to witness a revival of development work if the new sand found by the Lincoln Drilling Co. underlies the shallow zone from which production has been secured. No. 1 Williams, the discovery of the Lincoln Drilling Co., is in the extreme western part of the field and will probably ultimately result in the initiation of deep-zone exploration by operators producing out in the ocean beyond mean high tide. George F. Getty, who leased several hundred acres at Summerland a few months ago from George Becker, has already started to offset the Lincoln Drilling Co.'s discovery well and this project should be spudded in shortly. The success achieved by the Lincoln Drilling Co.

NINE PRODUCERS IN MUSKEGON FIELD AND THREE IN MT. PLEASANT DISTRICT

By Special Correspondent

MUSKEGON, Mich., July 13.—Nine new producing wells, all in the Dundee sand, added more than 5,000 bbls. a day initial production to the output of the Muskegon Field during the week. Five of the wells are in Laketon Township and four are in Muskegon Township.

Nelson & Witt, Inc., completed two new Dundee producers in Section 11-10-17, Laketon Township. No. 5 Charles Horton, NE SE, Section 11, made an estimated initial flow of between 1,500 and 2,000 bbls. No. 2-A George Fenner, SW SE, Section 11, made 200 bbls. initial.

Witt and Wyant completed No. 2 Alfred Fenner, NW SE, Section 11, making 700 bbls. initial and No. 3 Alfred Fenner made about 1,000 bbls. initial.

One of the largest new Dundee wells was the Puritan Oil Corp. and Majestic Development Co.'s No. 2 John DeGroot, NE SE, Section 12-10-17, which made 1,000 to 1,200 bbls. initial drilled only a foot or so into the pay sands.

The largest new Dundee oil producer in Muskegon Township was Charles W. Marsh and others' No. 5 Ira R. Hallock, SW NW, Section 7-10-16, with an estimated daily initial of 600 bbls. C. C. Mitchell and Joseph A. Mesiroff's No. 3 Pearl Morris, SW NW, Section 7-10-16, made from 350 to 400 bbls. initial daily.

The Swastika Oil & Gas Co.'s No. 2 Martin Berkema, NW NW, Section 8-10-16, struck a flow of about 5,000,000 feet of gas and not more than 15 to 20 bbls. of oil in a fine spray.

Charles W. Marsh and others' No. 2 Ira R. Hallock, NW NW, Section 7-10-16, will make about 200 or 250 bbls. a day in the Dundee with only enough gas to flow by heads.

L. E. Kennedy and others' No. 4 Charles I. Giles, NE SE, Section 6-10-16, made 100 bbls. initial before going to salt water. It is being drilled on to the Dundee.

New Locations

Four new locations were made in Muskegon Township and one in Laketon Township: Thompson Brothers' No. 2 Henry Smeltekop, NW SW, Section 5-10-16, Muskegon Township; Swastika Oil & Gas Co.'s No. 1 Andrew Luinstra, SW SE, Section 6-10-16, and No. 3-A Charles E. Gilbert, NW NE, Section 7-10-16; and John R. Cox and others' No. 1 John B. Nichols, SE NW, Section 8-10-16.

Dollie Mae Damm's No. 4 Carl P. Damm, SW SW, Section 12-10-17, is the only new location in Laketon Township.

Mount Pleasant

Three new producing oil wells were brought in last week in the Mount Pleasant Field. The Pure Oil Co.'s No. 2 Harrison, NE SW, Section 18-14n-2w, Greendale Township, Midland County, made 300 bbls. initial at 3,548-62 feet. It is a north offset to No. 1 Harrison. Chippewa

(Continued on Page 132)

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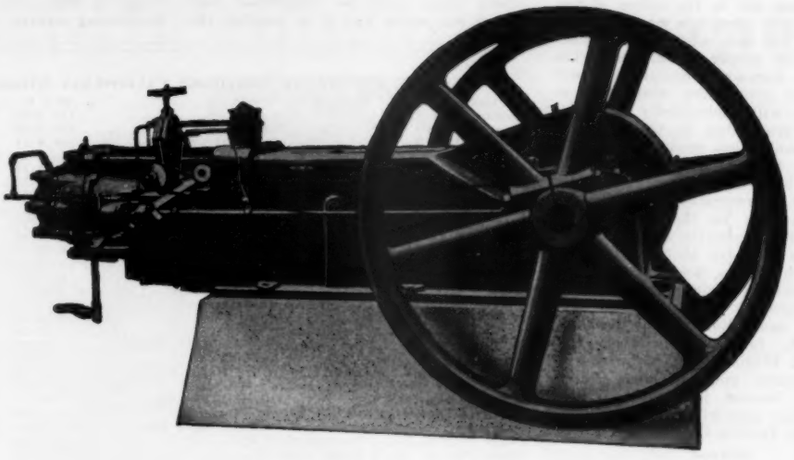

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will undoubtedly result in the drilling of a real deep test in the center of production as this concern's well was bottomed at 1,250 feet, with a good possibility of still deeper production. The anticipated deep-zone exploration will probably not need much stimulation as an attempt will undoubtedly be made to develop production in the Vaqueros formation, which has proven so prolific at Elwood. So far as is known no attempt has been made to test out the Vaqueros at Summerland and this will become a reality in the near future. George F. Getty recently abandoned No. 1 Becker as a duster at 5,040 feet but this well, while deep, does not bear any special significance with respect to the Lincoln's discovery as it was some distance from production and is probably north of the fault which bisects this area. No. 1 Williams sanded up shortly after completion and is being cleaned out. It is located just south of the State Highway and within throwing distance of the Pacific Ocean.

Elwood

Operators holding drill sites in the Elwood Field of Santa Barbara County are undertaking extensive preparations preliminary to early competitive drilling and several new holes should be started soon. The Barnsdall and Rio Grande have had a monopoly on the production since its discovery due to the fact that they control all of the potentially productive acreage inside of the mean high tide line. Several tideland drilling permits were issued subsequent to completion of the discovery well, however, and the Barnsdall and Rio Grande are facing a competitive drilling program out in the open ocean. The Honolulu Consolidated, Bankline and Pacific Western Oil Co. are working under rush orders to push ahead development as quickly as possible. To meet this projected drilling the Barnsdall and Rio Grande have found it necessary to construct five wharves out into the open ocean and more than a mile of new road bed along the ocean front. The Barnsdall's construction work will not be finished for another several weeks as it is a major undertaking although every effort is being made to hasten completion.

The new road under construction parallels the almost perpendicular cliff along the Bell Luton and Doty leases on the ocean front about 150 feet back of the tideline. To afford maximum protection during the winter and in periods of exceptionally rough weather the company has decided to elevate the road 6 feet above sea level and reinforce it with piles and heavy timbers. The wharves being constructed by the Barnsdall and Rio Grande extend out into the open ocean for 180 feet from property lines and will be of permanent construction. Two of the Barnsdall's five wharves are nearing completion and good progress is being made on the remaining three.

The Bankline Oil Co., which holds an exceptionally well located tideland drilling permit fronting on a portion of the Bell Luton lease, is rushing work ahead as quickly as possible and should be in a position to start rig construction in the very near future. This company contemplates the drilling of wells on this permit and it is needless to say the Barnsdall will be obliged to engage in offset drilling. The latter has anticipated this work and has a wharf paralleling the Bankline's wharf and will spot the former well for well. The Honolulu Consolidated is not quite as far advanced as the Barnsdall or Bankline but rapid progress is being made on the wharf now under construction. The Bankline and Honolulu Consolidated cannot approach their tideland properties from the land side and are obliged to haul in their materials on barges from Santa Barbara. Wooden piles and heavy timbers are being utilized in the construction of these two wharves in place of the steel supports used by the Barnsdall and Rio Grande.

In view of the elaborate preparations under way to prosecute tideland development production of the Elwood Field can be expected to reflect this work within the next few months. These shallow prolific 3,000-foot producers can be drilled from spud to completion well within six weeks and it is possible the first tideland producer may be finished early in September. One of the most interesting features is the elaborate preparations necessary for both production and development. Sump holes cannot be utilized on tideland permits and these operators have found it necessary to install steel tanks which can be pumped out as occasion demands. The steel sump tanks and steel containers necessary to hold rotary drilling fluid will be erected and suspended below the surface of each wharf. Extreme care is being exercised in the construction of these containers as it is absolutely imperative that all waste material be prevented from contaminating the ocean.

Long Beach

Daily production in the Long Beach Field has been unusually stable for the past several months and it is probable this district will continue to be an important factor for several years. Production will of course decline but the exceptional thickness of oil-bearing formation, which in many wells exceeds 1,500 feet, is indicative of long-lived production. There are 126 incompleted drilling projects under way and with a number of additional rigs going up we may anticipate frequent completions from time to time during the rest of the year. There are 927 wells producing in the Long Beach Field, 242 producing under a natural flow, 81 flowing by compressors and 604 pumpers. The Shell Oil Co., discoverer of the Long Beach Field, is by far the largest single producer with a daily output of 39,500 bbls. per day, followed by the Richfield with 22,000 bbls., The Texas Company with 13,500 bbls., Dabney & Johnston, 9,000 bbls., Union Oil Co., 6,500 bbls. and the General Petroleum 6,000 bbls.

Dabney & Johnston carried off completion honors in the Long Beach Field by finishing two new wells which showed an aggregate initial daily production of 3,522 bbls. and recompleting another doing 180 bbls. per day. No. 31 Signal was good for 2,492 bbls. from the Miocene at 7,417 feet, while No. 34 Signal tanked 1,030 bbls. of relatively clean 28.1 gravity oil during the initial 24-hour test from 6,205 feet. In addition to these two new wells, Dabney & Johnston recompleted No. 1 Signal doing 180 bbls. daily after plugging back from 4,290 feet to 4,247 feet. These operators are running 16 strings of tools at Long Beach and are rigging up rotary equipment in five more holes. They should finish Nos. 26 and 28 within a few days and should add several more within a few weeks. The Richfield Oil Co., which has experienced considerable success in deep-zone development at Long Beach, concluded its development program in this area a few months ago and has devoted its attention to rejuvenating former producers which have shown abnormal declines. During the past week the company recompleted No. 11 Haas doing 355 bbls. of 27.6 gravity oil daily after redrilling and deepening it to 6,951 feet. This well was originally finished in February, 1927, doing 2,390 bbls. daily from 5,280 feet and was subsequently recompleted in August, 1928, flowing 3,410 bbls. per day from 6,337 feet. A check of development work in the Long Beach Field indicates the probable completion of about 10 more wells before the close of the month.

Seal Beach

There was only one well finished in the Seal Beach Field but a check indicates that three other potential producers will be tanking oil within a few days. The well put on production this week was the Associated's No. 1 Bryant, which was recompleted doing 1,160 bbls. daily after being redrilled and deepened to 5,470 feet. This project has had a varied career from December, 1926, when it was first finished doing 3,024 bbls. daily from 4,366 feet. It was again recompleted in May, 1927, flowing 2,099 bbls. per day from 4,545 feet and once again returned to production doing 225 bbls. daily in October, 1927, after being deepened to 4,742 feet. No. 1 Bryant was recompleted for the third time in March, 1928, flowing 995 bbls. per day from 4,780 feet and was making about 200 bbls. when recently killed to deepen. Drilling operations in this district are still being restricted by the Associated,

(Continued on Page 123)

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well, location—	S-T-R	Depth	Status
Standard, No. 5-9 Saticoy, Ventura Co.	10- 2-22	7,191	br. sh. drilling
American Oil Co., No. 1 Camarillo, Ventura Co.	33- 2-10	1,200	suspended
Bolsa Chica, No. 1-A Temescal, Ventural Co.	4- 4-18	641	hd. sd. drilling
Superior Oil Co., No. 1 Santa Paula, Ventura Co.	14- 4-21	520	suspended
Miley, E. J., No. 2 Red Mountain, Ventura Co.	7- 3-23	1,591	hd. sd. drilling
Shell, No. 1 Simi, Ventura Co.	31- 3-17	2,960	hd. sd. drilling
Continental, No. 1 Sulphur Mountain, Ventura Co.	21- 4-22	3,765	suspended
Continental, No. 2 Sulphur Mountain, Ventura Co.	22- 4-22	6,740	suspended
Continental, No. 3 Sulphur Mountain, Ventura Co.	21- 4-22	1,630	sd. sh. drilling
Lockwood Oil Co., Well No. 1, Ventura Co.	28- 8-21	130	sd. sh. drilling
Milham Expltn., No. 1-A Buttonwillow, Kern Co.	8-28-23	4,662	gas well, idle
Milham Expltn., No. 2 Buttonwillow, Kern Co.	8-28-23	2,730	gas well, idle
Milham Expltn., No. 3 Buttonwillow, Kern Co.	8-28-23	2,694	gas well, idle
Milham Expltn., No. 4 Buttonwillow, Kern Co.	6-28-23	2,670	gas well, idle
Milham Expltn., No. 5 Buttonwillow, Kern Co.	5-28-23	2,500	gas well, idle
Milham Expltn., No. 6 Buttonwillow, Kern Co.	8-28-23	2,676	gas well, idle
Milham Expltn., No. 7 Buttonwillow, Kern Co.	6-28-23	2,720	suspended
Milham Expltn., No. 8-A Buttonwillow, Kern Co.	8-28-23	2,673	gas well, idle
Milham Expltn., No. 9 Buttonwillow, Kern Co.	8-28-23	2,000	bl. sh. drilling
Milham Expltn., No. 10 Buttonwillow, Kern Co.	8-28-23	618	sd. sh. drilling
Aldrich, D. C., No. 1 Buttonwillow, Kern Co.	12-28-23	Mtl.	grading
Lincoln Drlg. Co., No. 1 Buttonwillow, Kern Co.	6-28-23	190	suspended
Richfield Oil Co., No. 2 Semitropic, Kern Co.	36-27-23	7,540	suspended
Stabler, W. W., No. 1 Comanche Point, Kern Co.	23-32-29	3,409	suspended
Elmer Oil Co., No. 1 Shafter, Kern Co.	8-28-25	6,100	suspended
Elmer Oil Co., No. 1 Bena, Kern Co.	15-30-30	3,000	hd. sd. drilling
Elmer Oil Co., No. 1-A Rosedale, Kern Co.	33-29-26	2,480	sd. drilling
Taft Drlg. Co., No. 1 Union Avenue, Kern Co.	2-30-27	3,681	sd. sh. drilling
Shell Oil Co., No. 1 Lerdo, Kern Co.	5-29-27	3,770	recemented
General Pet., No. 1 McFarland, Kern Co.	25-26-25	5,900	br. sh. drilling
Union, No. 2 San Emidio, Kern Co.	5-10-21	3,740	br. sh. drilling
Currency Pet. Co., No. 1 Jacalitos, Fresno Co.	28-21-14	2,302	fishing
Currency Pet. Co., No. 2 Jacalitos, Fresno Co.	14-21-14	350	redrilling
Hornaday & Huggins, No. 1 Kerman, Fresno Co.	32-14-18	3,715	suspended
Cates Oil Co., No. 1 Joaquin Ridge, Fresno Co.	7-19-15	114	suspended
Oceanside Oil Co., No. 1 Krayenhagan, Fresno Co.	33-22-17	738	redrilling
Petroleum Securities, No. 1 Kerman, Fresno Co.	20-20-16	Mtl.	suspended
Petroleum Securities, No. 2 Kerman, Fresno Co.	28-20-16	555	sd. drilling
Shell Oil Co., No. 1 Westhaven, Fresno Co.	24-19-18	2,220	survey hole
Shell Oil Co., No. 2 Westhaven, Fresno Co.	26-19-18	2,390	survey hole
Shell Oil Co., No. 3 Westhaven, Fresno Co.	27-19-18	1,915	survey hole
Shell Oil Co., No. 4 Westhaven, Fresno Co.	17-19-19	1,660	survey hole
Shell Oil Co., No. 5 Westhaven, Fresno Co.	6-20-18	.....	location
Pismo Dome Oil Co., No. 1 Pismo, San Luis Obispo Co.	5-32-13	300	sd. drilling
Union, No. 1 Huasna, San Luis Obispo Co.	34-32-15	3,700	suspended
Union, No. 1 North Huasna, San Luis Obispo Co.	12-32-14	3,550	br. sh. drilling
Midwest Refining Co., No. 1 Huasna, San Luis Obispo Co.	34-31-15	990	cemented
Panorama Oil Co., Well No. 1, San Luis Obispo Co.	7-31-31	3,914	cleaning out
Paso Robles Synd., No. 1 Paso Robles, San Luis Obispo Co.	27-27-11	2,210	br. sh. drilling
Shell, No. 5 Guadalupe, Santa Barbara Co.	36-10-35	Mtl.	building rig
Shell, No. 2 Goleta, Santa Barbara Co.	36- 5-31	4,850	sespe, drilling
Petroleum Securities, No. 1 Goleta, Santa Barbara Co.	.....	3,390	sd. sh. drilling
Petroleum Securities, No. 1 Pomatto, Santa Barbara Co.	.....	299	sd. sh. drilling
Union, No. 1 Buel Canyon, Santa Barbara Co.	X- 7-31	1,622	redrilling
O'Neil, L. B., No. 1 Los Alamos, Santa Barbara	X- 8-32	Rig	rigging up
Western Gulf, No. 1 Point Conception, Santa Barbara Co.	X- 5-33	3,115	recemented
Standard, No. 1 Point Conception, Santa Barbara Co.	X- 5-34	2,428	idle, litigation
Standard, No. 1 Point Arguello, Santa Barbara Co.	4- 7-35	Mtl.	building rig
Nevada Standard, No. 1 Goleta, Santa Barbara Co.	10- 4-28	4,560	suspended
General Pet., No. 1 Elwood, Santa Barbara Co.	21- 4-28	4,214	gr. sh. drilling
Pacific Western, No. 1 Naples, Santa Barbara Co.	7- 4-29	3,100	sespe, drilling
Padre Oil Co., No. 1 Dos Pueblos, Santa Barbara Co.	18- 4-27	4,160	sespe, drilling
System Oil Co., No. 1 Orcutt, Santa Barbara Co.	36-10-34	3,168	redrilling
Keystone Oil Co., No. 1 Santa Maria, Santa Barbara Co.	33-10-34	960	sd. sh. drilling
Dome Oil Co., No. 1 Santa Maria, Santa Barbara Co.	20-10-35	Mtl.	building rig
American Oil Co., No. 1 Summerland, Santa Barbara Co.	33- 4-25	809	suspended
Getty, Geo. F., No. 2 Summerland, Santa Barbara Co.	22- 4-26	Rig	rigging up
Lincoln Drlg. Co., No. 1 Summerland, Santa Barbara Co.	21- 4-26	1,249	400 bbls. daily
Keystone Oil Co., No. 1 Surf, Santa Barbara Co.	18- 7-35	Rig	rigging up
Gaviota Oil Co., No. 1 Surf, Santa Barbara Co.	13- 7-35	.....	location
Shell, No. 1 Summerland, Santa Barbara Co.	18- 4-25	Mtl.	suspended
Channel Oil Co., Well No. 1, Santa Barbara Co.	29- 4-27	6,304	suspended
Channel Oil Co., No. 1 Fellowship, Santa Barbara Co.	29- 4-27	1,080	redrilling
Continental, No. 1 Carpenteria, Santa Barbara Co.	33- 4-25	4,130	gas well
Continental, No. 2 Carpenteria, Santa Barbara Co.	33- 4-25	4,090	br. sh. drilling
Colusa Oil Co., Well No. 1, Colusa Co.	31-15- 4	620	hd. sd. drilling
Italo American, Well No. 1, Colusa Co.	20-13- 3	781	hd. sd. drilling
North Counties Oil Co., Well No. 2, Humboldt Co.	36- 2- 1	2,205	suspended
Humboldt Oil Co., Well No. 1, Humboldt Co.	6- 2- 1	3,041	redrilling
Applegate & Renshaw, Well No. 1, Merced Co.	24- 6-10	3,750	hd. sd. drilling
Kuhns, H. L., Well No. 1, Merced Co.	8-12-19	640	gr. sd. drilling
Calhoma Oil Co., No. 1 Livermore, Alameda Co.	9- 3- 3	1,549	will test
Shell, No. 1 Dudley, Monterey Co.	15-22- 9	3,304	gr. sd. drilling
Union, No. 1, San Lucas, Monterey Co.	8-22- 8	1,018	redrilling
Standard, No. 1 King City, Monterey Co.	X-21- 8	Mtl.	building rig
Marland, No. 1 Bradley, Monterey Co.	32-24-11	5,930	fishing
Tuck Oil Co., No. 1 Los Gatos, Santa Clara Co.	15- 8- 1	852	suspended
Dudley Ridge Synd., No. 1 Tulare, Kings Co.	12-23-19	1,305	gas, shut in
O'Donnell, J. E., No. 1 Tulare, Kings Co.	7-23-20	Rig	rigging up
Associates Pet., No. 1 Lewis Creek, San Benito Co.	5-19-10	501	suspended
Twin States Oil Co., No. 1 Soldani, Mendocino Co.	14-12-17	102	sd. drilling

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

The Texas Company, No. 1 Clearwater, Los Angeles Co.	8- 4-12	1,760	sd. sh. drilling
Standard, No. 1 Hawthorne, Los Angeles Co.	5- 3-14	5,910	gr. sd. drilling
Hummel, Joseph, No. 1 Redondo, Los Angeles Co.	28- 3-14	.....	location
Jackson, R. W., No. 1 Whittier, Los Angeles Co.	19- 2-11	1,477	suspended
Burlingham Pet. Co., No. 1 Compton, Los Angeles Co.	17- 3-13	2,204	suspended
Lee & Brainerd, No. 1 Rosecrans, Los Angeles Co.	17- 3-13	Rig	suspended
Johnson, D. W., No. 1 Compton, Los Angeles Co.	21- 3-13	.....	foundation
Jackson, R. B., No. 1 Compton, Los Angeles Co.	8- 3-13	Mtl.	building rig
Hansen, N. J., No. 1 Watson, Los Angeles Co.	17- 4-13	Rig	suspended
Easton & Smith, No. 1 Calabasas, Los Angeles Co.	19- 1-17	2,982	suspended
Pugh Miller Drlg. Co., No. 1 Calabasas, Los Angeles Co.	6- 1-17	2,550	suspended
Russell Oil Co., No. 2 Joughin, Los Angeles Co.	25- 3-17	1,704	suspended
Pomona Oil Co., Well No. 1, Los Angeles Co.	32- 1- 8	1,186	hd. sd. drilling
Beard, G. F., No. 1 Brea Canyon, Los Angeles Co.	30- 2- 9	616	sd. sh. drilling
Anchor Oil Co., No. 1 Puente, Los Angeles Co.	19- 2-10	4,820	suspended
Rucker, R. C., No. 1 Puente, Los Angeles Co.	27- 2-10	1,581	suspended
Urmi Oil Co., No. 1 Puente, Los Angeles Co.	31- 2- 8	211	sd. drilling
Shell, No. 1 Coyote, Los Angeles Co.	28- 3-10	4,016	sd. sh. drilling
Prairie Oil Co., No. 1 Montebello, Los Angeles Co.	32- 1-12	3,765	sd. sh. drilling
Monterey Park, No. 1 Jepson, Los Angeles Co.	26- 1-12	4,220	3-in. oil sand
Union Oil Co., No. 1 Richfield, Los Angeles Co.	13- 3- 9	800	hd. sd. drilling
Southwestern Drlg. Co., No. 1 Richfield, Los Angeles Co.	21- 3- 9	5,475	gr. sd. drilling
Queen, J. M., No. 1 Newhall, Los Angeles Co.	22- 3-16	.....	material
Anderson, F. B., No. 1 Hasley Canyon, Los Angeles Co.	1- 3-16	490	cleaning out
So. Calif. Drlg. Co., No. 1 Newhall, Los Angeles Co.	18- 3-16	318	sd. sh. drilling
Pico Dome, No. 1 Hasley Canyon, Los Angeles Co.	14- 3-16	660	hd. sd. drilling
Calif. Eastern, No. 1 Wickham, Los Angeles Co.	32- 5-17	3,517	suspended
Coastline Oil Co., No. 1 Devil Canyon, Los Angeles Co.	31- 5-17	514	suspended
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,600	gr. sd. drilling
Oil Well Eng. Co., No. 1 Newport, Orange Co.	21- 6-10	2,805	hd. sd. drilling
Hall Pet. Co., No. 1 Murrietta, Riverside Co.	23- 7- 3	975	skid rig
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	1,299	hd. sd. drilling
Imperial Valley Oil Co., Well No. 1, Imperial Co.	32-11-10	2,980	cleaning out
Davenport O. & G. Co., No. 1 San Marcos, San Diego Co.	30-12- 3	847	suspended
Turner, S. S., No. 1 Escondido, San Diego Co.	25-12- 2	1,999	sd. sh. drilling
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	X-13- 4	Mtl.	building rig

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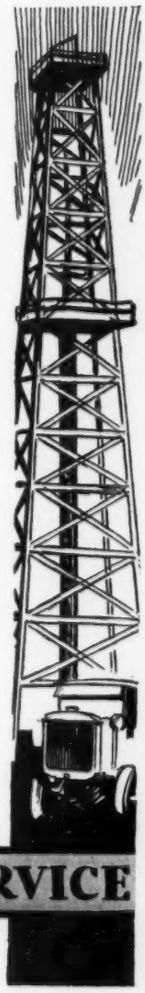

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BRIDGEPORT, CONNECTICUT

Five Completions in Old Lima Field

Illinois Only State in Central West Failing to Report Completion. Others Had Light Pumpers, Gas Wells and Dry Holes

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, July 15.—Illinois was the only division of the Central West Field that failed to report a completion during the past week, but none of the divisions outside of Michigan reported any oil wells of size, as most of the wells were light pumpers, dry holes and gas wells. Development work is just about holding its own in all the divisions of the Central West Field.

Five completions were reported from the old Lima Field of northwestern Ohio, four being small pumpers and one fairly good gas well. In Liberty Township, Hancock County, L. Cramer's No. 3 well, 600 feet from the south line and 200 from the east line of the Sol. Fry, in the southeast quarter of Section 31, pumped an initial of 15 bbls., the Trenton being topped at 1,324 feet and drilled 56 feet into the sand. In Delaware Township, same county, and near the Wyandot County line, Harmon and Watts drilled a test on the Harley Eatherton 76 acres, Section 7, that is credited with a volume of 280,000 feet of gas from the Trenton Lime formation. Ridge Gas and Oil Syndicate is starting No. 3 on the Elmore Cross, Section 35, Biglick Township, same county.

Alva Spencer and others drilled No. 4 well, 30 feet from the south line and 750 feet from the west line of the Phil Hiltner farm, in the southwest quarter of Section 10, Marion Township, Allen County, which found the top of the Trenton at 1,207 feet, and at 42 feet in showed an initial production under pump of 3 bbls, at a total depth of 1,249 feet.

Cessna, Feasel and Lowman drilled a second test 1,060 feet from the north line and 200 feet from the west line of the Mary E. Betts farm, Section 29, Jackson Township, Sandusky County, getting a 5-bbl. pumper at from 1,262 to 1,314 feet.

In the outskirts of Mendon, in Union Township, Mercer County, S. W. Houser's test on his own property in the southwest quarter of Section 21, pumped 5 bbls. initial at from 1,140 to 1,200 feet.

The new pool recently opened by J. H. Murphy & Sons on the Chas, B. Miller farm, in Section 21, Pleasants Township, Seneca County, does not appear to get the active drilling play that the Murphy Pool, in Liberty Township, same county, did a few years ago, but this may change when a couple more wells are drilled. The Miller lease and well was sold to the Ohio Oil Co., with a 400-acre lease and the well. The new owners will feel their way and get the best of results, instead of rushing the drill as is the custom when a new wildcat shows big production.

CENTRAL OHIO

Twenty-four completions were reported from the Central Ohio Fields, of which 10 were producers with an initial production of 176 bbls., five dry holes and nine gas wells. In new work started during the same period there were 22 new locations made, and 34 new wells started drilling, a total of 56, the largest number of any month during the current year.

In Ashland County, Vermillion Township, the Ohio Fuel Co.'s No. 1-3,488 on the Mary J. Armstrong, Section 22, developed into a duster. Same company started the drill at No. 1-3,620 on the James Hess, Section 30, Jackson Township, and staked location on the P. S. Huffman, Section 6. The Kemrow Co. made a location for a second test on the Henry Miller, Section 6, same township. In Orange Township, the Kemrow Co. drilled a dry hole on the G. and N. Hess, Section 35, as no sand was found. Ohio Fuel Gas Co. made a location on the J. E. Laghrey, Section 32, same township. In Lake Township, Davis and others' test on the L. O. Chesrown, Section 3, is reported to have made 50 bbls. the first 24 hours at from 534 to 588 feet. B. Slagel is drilling on the J. Anderson, Section 4. Robinson and others are drilling No. 3 J. A. Heffelfinger, Section 19, also No. 2 on the C. I. Sellers, Section 9. In Mohican Township, B. Slagel's second test on the A. and A. Metcalf, Section 21, is reported good for 3 bbls initial. In this well the first sand was encountered at from 566 to 677 feet, then came a break, the oil being found at from 688 to 715 feet. W. J. Smith drilled a duster in a second test on the W. J. Obrecht, Section 32, same township, at a depth of 742 feet, there being no pay sand encountered. Meltzer is drilling on the Michael Ott, Sr., Section 34, and Welty and others are drilling No. 1, Rosanna Welty, Section 5, same township.

In Medina County, Harrisville Township, Glen Fetter and others drilled a light gas well on the Glen Fetter, Lot 131, at from 1,880 to 1,900 feet. Harmon and George are drilling No. 3 on the Idana V. Stair, Lot 142. Ohio Fuel Gas Co. made location for No. 2-4,960 on the John Gunkleman, Section 11, Medina Township, and is drilling No. 2-3,629 Jesse V. Fleckinger, Lot 59, Westfield Township. Same company is drilling No. 1-4,755 J. E. Gault, Section 6, Lafayette Township, and made a location on the Clare M. Jones, Section 15, same township. East Ohio Gas Co. is drilling No. 3 J. and A. Jalensics, Lot 2, Chatham Township.

Lorain County

In Lorain County, Carlisle Township, the Ohio Fuel Gas Co. drilled a dry hole in No. 1-3,603 Paul Roling, Lot 23. Same company made location for No. 2 John Clark, Lots 13-18, and for No. 1 on the Andrew Steidt, Lot 22.

In Wayne County, Chester Township, Harmon and George have a very nice gas well on the J. M. Wengar, Section 16, at from 3,106-14 feet. The Kemrow Co. is drilling on the P. T. Swinehart, Section 14. Bryan and others are drilling a second test on the Willis J. Wise, Section 7.

In Holmes County, Hardy Township, the Kemrow Co. is drilling No. 2 Mary Beeler, Lot 20. Ohio Fuel Gas Co. is drilling No. 1-4,175 Seville Herman, Section 29, Paint Township. In Richard Township the Logan Gas Co. is drilling No. 10-4,718 Chas. Garver, Sections 6 and 15, and the Ohio Fuel Gas Co. is drilling No. 10-3,589 White & Williams, Section 24.

In Knox County, Berlin Township, Schenker Bros. failed to find any sand on the John Spohn, Section 9, and the test was dry at 2,479 feet. Upham Gas Co. is drilling on the Chas. Clements, Section 18, Monroe Township. Ohio Fuel Gas Co. is drilling No. 1-3,619 J. J. Hyatt, Section 6, Brown Township.

In Coshocton County, Newcastle Township, Bell Bros. got a dry hole in a second test on the Martin Mizer, Section 18, at from 778 to 785 feet. In Franklin Township the Ohio Fuel Gas Co. has a fairly good gas well in No. 1-3,460 Cordia A. Corey, in the third quarter. In this well the Niagara was topped at 2,445 feet, pay sand being found from 2,575 to 2,579 feet; total depth 2,590 feet.

In Summitt County, Franklin Township, F. A. Brendall and others struck a rather large gas well on the C. and M. Rumminger, Section 27, at from 4,091-4,125 feet. Ohio Fuel Gas Co. is drilling No. 1-3,617 on the Rebecca Bolich, Section 12, Copley Township, and the East Ohio Gas Co. made a location on the J. A. and H. Franks, Section 22.

Summitt Township

In Licking County, Hanover Township, the Hope Construction & Refining Co.'s No. 3 on the Chas O. Bannon, Section 16, produced an initial of 50 bbls. at 3,031-68 feet. Ohio Fuel Gas Co. set a stake on the Nellie Weaver, Section 13, and the North Fork Oil Co. is drilling No. 6 J. C. Williams, Section 1. In Perry Township, The Settles Oil Co. found a 1-bbl. pumper at from 594 to 600 feet in a second test on the Nellie Smith, Section 17, Perry Township. Hope Construction & Refining Co. made locations for Nos. 3 and 4 Sarah Rector, Section 9, and Hulse & Kundtz made a location for No. 10 Joseph Chaney, Section 1. Armstrong & Lyttle are drilling No. 12 J. W. Motherspaw, Section 12, Franklin Township.

In Muskegon County, Jackson County, Pure Oil Co. made a location for a second test on the Lloyd McKee, Section 5, and the Hope Construction Co. made a location for No. 9 W. E. Halphrey, same section.

In Athens County, Ames Township, the Ohio Fuel Gas Co.'s No. 3-3625 on the John Fleming, in fractional Section 2, drilled a fine gas well in a shallow test in a stray sand from 680 to 690 feet, total depth 692 feet, also a light gas well in No. 2-2,624 on the George Linscott, Section 17. A showing was found at from 800 to 855 feet, total depth 865 feet. Ohio Fuel Gas Co. made a location for No. 2-4,772 on the Loring Hill, in fractional Section 3. Orondorff and others are drilling on the Kesler-Sayer, Section 23. Gross and others are drilling on the Mattie Beasley, Section 20, Athens Township. Ohio Fuel Gas Co. made a location on the Roas Jeston, fractional Section 12, Lodi Township, and the Moore Gas Co. is drilling a second test on the Fred S. Moore, fractional Section 5, same township.

In Meigs County, Scipio Township, H. W. Taggart and others' No. 3 on the Lydia Rowley, Section 13, is a fair sized gas well in the first Cow Run sand at 322 feet, and No. 4, same lease, is drilling. In Sutton Township, the Southern Ohio Gas Co.'s No. 3 on the Lucius Cross estate, produced 4 bbls. initial from the upper Berea sand at from 1,680 to 1,701 feet, total depth 1,704 feet. Preston Oil Co. made a location for No. 2 on the George J. Reefer, Section 18. Tyree and others are drilling No. 11 Wm. Carnahan, Section 11. Simon Lebow and others are drilling No. 3 Raymond Krauter, Section 20, same township. Thompson and others are drilling on the R. M. Beaver, Section 10. In Bedford Township the Ohio Fuel Gas Co.'s No. 1-3,577 on the Francis Wenget, Section 27, Bedford Township, are drilling No. 1-4,734 on the W. L. Whaley, Section 18.

Jackson County

In Jackson County, Milton Township, the Ohio Fuel Gas Co. has what shows for a duster at No. 1-3,556 Cora Branton, Section 18. Same company made a location for No. 3-4,767 on the Daniel Alban, Section 21, Franklin Township. In Washington Township, same company is drilling No. 2-3,565 on the I. J. McMillan, Section 23. In Lick Township, Penn Ohio Gass Co. got an average gas well in No. 6 on the Leo Evans, Section 35, in the Clinton sand at from 2,544 to 2,550 feet, total depth 2,570 feet. Ohio Fuel Gas Co. made a location on the A. Henson, Sections 26 and 36, Lick Township. In Coal Township, the Ohio Fuel Gas Co. found a dry hole in No. 1-3,452 on the Nannie Shook and others, Section 33, in the Clinton at from 2,358 to 2,364 feet, total depth 2,400 feet. Libbey Owens Glass Co. is drilling a second test on the Moses L. Morgan, Section 16, Jefferson Township.

In Vinton County, Knox Township, Walsmith & Campbell are drilling a second test on the Henry W. Brooks, Section 3, and Patton & Clutts are drilling a second test on the John Martin, in fractional Section 3.

In Lawrence County, Elizabeth Township, the Ohio-Kentucky Gas Co. is reported to be down 76 feet below the Lima formation at a depth of 2,876 feet, and still drilling. This test is in Elizabeth Township on the Wm. Jeffries, Section 30.

In Mahoning County, the Penn Crude Oil Co.'s test on the H. W. Miller, Section 5, topped the Clinton formation at 5,125 feet, and at last report had drilled to 115 feet in that formation to a total depth of 5,240 feet.

In Trumble County, Mecca Township, John Arthur developed an average gas well on the Albert L. Rush, Section 2. The Red sand in this well was found at from 4,044 to 4,082 feet, and the White sand from 4,082 to 4,107 feet.

Guernsey County

In Guernsey County, Wheeling Township, Blackstone and others' No. 4 J. O. Alloway, Section 10, is credited with an initial of 68 bbls. Top of the Niagara Lime was found at 3,330 feet, top of Lima sand 3,497 feet, total depth 3,503 feet. Ohio Fuel Gas Co. made a location on the C. C. Wilson, Section 11, same township. Same company made a location for No. 3 on the John A. Aycoff, Section 9, Westland Township, and is drilling No. 1-3,576 on the Wm. H. Sheeley, Section 10, Knox Township, as well as No. 2,4,451 on the W. J. Nicle, Section 36, Spencer Township.

In Morgan County, Malta Township, the Ohio Fuel Gas Co. has a fair gas well in No. 1-3,604 on the C. H. Price, Sections 20 and 21, the gas being found in the lower Berea sand at from 1,592 to 1,618 feet, total depth 1,625 feet. In Marion Township the same company made a location for No. 1-6,768 on the J. J. Worthington, Lot 8, and Bowman and others are drilling No. 2, Geo. H. Carr, Section 24. In Penn Township, the Ohio Fuel Gas Co. is drilling No. 1-3,563 on the Grant Coulson, Section 2. In Union Township, Van Fossen & Scott are drilling No. 31 on the Chas. Harrison, Section 11, and in York Township the Hopewell Fuel Gas Co. is drilling a second test on the Wm. Coulter, Section 22.

INDIANA

Out of five completions reported from Indiana, only one was a producer and four were dry holes. The producer was found by the Siosi Oil Corp. in a second test, 200 feet from the south line and 600 from the west line of the Lennis Thomas, in the NW SW, Section 32, Prairie Creek Township, Vigo County, which produced an initial of 25 bbls. at a total depth of 2,234 feet. Pearce and others are drilling No. 4 on the F. E. Shattuck, same section.

Moses McGillvay drilled a dry hole 1,120 feet from the north line and 250 from the west line of the J. B. Buchamp, in the NE SE, Section 15, Fairbanks Township, Sullivan County, the total depth of the hole being 2,468 feet. Chas. W. Scott and others are drilling No. 4 on the C. W. Scott, Section 6, same township. Siosi Oil Corp, is drilling No. 4 on the Iley Williams, Section 4, and the Twin Creek Oil Co. is drilling No. 3 on

(Continued on Page 121)

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New Well in Irion County Best to Date

Possibility of Small Producer Opening New Pool in Crockett County. Slight Extension of Hendricks Pool

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 15.—With the proving up of a new well in Irion County, and the possibility of a small producer opening up a new pool in Crockett County, and another small producer south of the Pecos Valley Pool in Pecos County, West Texas, had plenty of scattered interesting features to watch during the week. A slight eastern extension of the Hendricks Pool created interest in that locality also.

W. W. Brown and Perry Fox's (formerly Kimbrough and Flinchbaugh) No. 1 Tankersley, in the northeast corner of the F. Willig Survey No. 712, 2½ miles southwest of Mertzon, has proved itself the best well to date in Irion County, clearing the doubts in many minds, and showing itself to be more sustaining than the other tests which have encountered good showings in this part of the district.

From 1,318-29 feet it encountered a good showing of oil, but at 1,333 feet another showing started filling the hole with oil which tested 37 gravity, corrected. It was drilled 2 feet in the pay and shut down at 1,335 feet and put on the pump. This is sweet oil production, something of which the Permian Basin has not been able to boast much in the past, having only three other small pools of this kind of production. Already negotiations are under way to purchase the output and run a short line to a point on the Orient Railroad where a loading rack will be erected for shipping the crude to a refinery. It is understood that the Humble Pipe Line Co. has been dealing with the owners for the production, as likewise the San Angelo Refining Co., which has a small refinery at San Angelo, Tex.

Several lease trades about the well have already been consummated, and no doubt there will be considerable more land changing hands, and other tests started on offset acreage at once. An accompanying plat shows the location of the new discovery with other tests in the neighborhood which have had good showings of oil at shallow depths.

From 6 a.m., July 13, to 6 p.m., July 13, the well pumped 48 bbls., and from 6 p.m., July 13 to 6 a.m., July 14 it pumped 37 bbls., or an average of about 85 or 90 bbls. per day. A 5 per cent showing of water has also been reported, but this may be coming from behind the casing above.

The Wheat Field in Loving County, the McMillan Pool in Runnels, with Continental Oil Co.'s No. 1-B University in the Big Lake Field, Reagan County, are the other sweet oil producers, although some of the other pools, not carrying much of a sulphur content, are mentioned in general conversation as sweet producing fields, but really carry considerable sulphur.

Crockett County Discovery

W. A. Moncrief and others' No. 1 Massie, 1,170 feet from the north line and 1,320 feet from the east line of the southwest quarter of Section 47, Block UV, G.C.&S.F. Survey, 11 miles north of Ozona in Crockett County, startled operators and companies in West Texas when it topped a pay formation at 1,417 feet and started filling with oil. It was shut down at 1,420 feet where it swabbed 35 bbls. after standing 48 hours, and later swabbed 25 bbls. after standing another 12 hours. The owners decided to deepen, feeling that more pay would perhaps be encountered, and production bettered, but sulphur water intervened from 1,447-50 feet, as much as 3 bailers per hour, causing the well to be shut down for plugging back to the above pay and to produce it there with the aid of about 5,000,000 feet of gas coming from gas sand above at 1,350 feet.

WILDCAT OPERATIONS IN WEST TEXAS

Week Ended July 13

Company, farm and location—	Remarks—
ANDREWS COUNTY	
Mid-Continent Oil & Gas Co.'s No. 1 Fisher, 1,320 ft. N and 200 ft. E of SW cor. Sec. 5, Blk. A-36	Top salt 1,720 ft.; running 8¼-in. casing 3,355 ft.; rainbow show oil 4,476 ft.; 3,700 ft. salt water in hole 4,658 ft.; shut down 4,674 ft. for orders.
BORDEN COUNTY	
Louisiana Oil & Ref. Co.'s No. 1 York, 330 ft. from N. and 1,320 ft. from W Sec. 322, Blk. 97, H.&T.C.R.R. Sur.	Location.
Moncrief et al's No. 1 Munger, C of SW Sec. 14, Blk. 31	Moving in material.
Teas & Wheeler's No. 1 Long, 1,320 ft. N and E of Sec. 27, Blk. 30, T.&P. Sur.	Drlg. 550 ft.
BREWSTER COUNTY	
E. W. Bateman et al's No. 2 Nevill, 2,000 ft. S and W line of Sec. 62, Blk. 13, G.H.&S.A.R.R. Sur.	Location.
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor. Sec. 45, Blk. G-15, G.C.&S.F.	Straightening crooked hole 1,935 ft.
Cowden & Bowser's No. 1-A Jackson & Harmon, Sec. 1, Blk. 331, T.C.R.R. Sur.	Set 8-in. 1,530 ft.; shut down 2,000 ft.
Forrest Oil Co.'s No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	Shut down 300 ft.
J. M. Hickey's No. 1 Jackson & Harmon, NE cor. Sec. 182, Blk. 9, G.H.&S.A. Sur.	Shut down 1,302 ft.
Johnson & Weekley's No. 1 Jackson & Harmon, C Sec. 104, Blk. 10, G.H.&S.A. Sur.	Drlg. 1,640 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,740 ft.
COKE COUNTY	
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H.&T.C. Sur., elev. 2,750 ft.	Cleaning out 2,855 ft.
Mid-Kansas Oil Co.'s No. 1 W. E. Lackey, 330 ft. N and E of SW cor. Sec. 272, Blk. 1-A, H.&T.C.	Pay 3,755-56 ft.; 6⅝-in. casing set 3,451 ft.; drlg. 3,830 ft.
Ray E. McCamey et al's No. 1 McCutchen, 2,300 ft. S and 785 ft. W of NE cor. of T. J. Hines Sur. No. 4	Underreaming 3,015 ft.
CONCHO COUNTY	
Duffy et al's No. 1 Gilliam, 1,530 ft. N and 1,120 ft. W of SE cor. Sec. 21, Blk. 10, H.&T.C.R.R.	Spudded and shut down.
Jones & Leiner's No. 1 Jones, 430 ft. S and 15 ft. E of NW cor. John G. Reh Sur. No. 1,878	Top lime 1,770 ft.; top pay 1,775-80 ft.; 18 ft. oil in hole; to test; shut down 1,975 ft.
Turner et al's No. 1 Borsig, 150 ft. from S of SE cor. G. Emig Sur. 130, 6 miles west of Paint Rock	Shut down 70 ft.
CRANE COUNTY	
Duffey & Skelly's No. 1 University, 2,310 ft. from S, 330 ft. from E Sec. 45, Blk. 30, University Land	Top salt 1,015 ft.; drlg. 1,845 ft.
Gulf Prod. Co.'s No. 63 McElroy, 1,442 ft. from N and 4,950 ft. from W of Sec. 200, Blk. F, C.C.S.D.& R.G.N.G.	Drlg. 1,300 ft.

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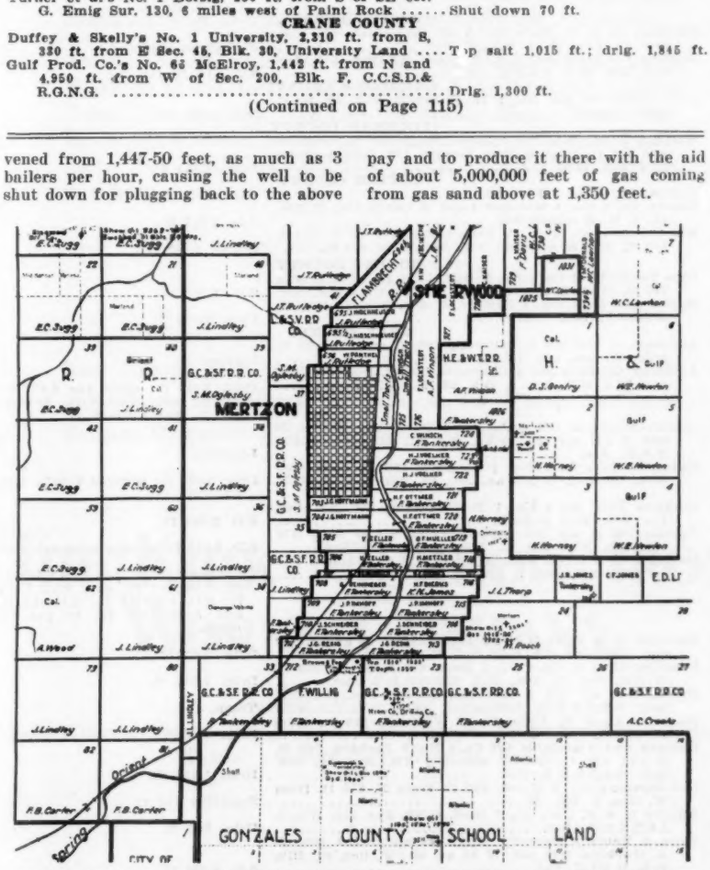

Plat showing Brown & Fox's No. 1 Tankersley, new discovery in Irion County, and other tests, in this area, which have had showings of oil. The Kingwood Oil Co.'s No. 1 Suggs, which is now drilling below 8,000 feet, can be seen in the upper left-hand corner of the map. Hill's No. 1 Horney can be noted in Section 2, Block 3, H.&T.C. Survey. This was the first good showing in the county.

Other tests in this same area have had good showings of oil and gas, but none amounting to commercial producers, and this well was believed to be an opener of the second pool in Crockett, the Powell Pool in the northwestern part of the county producing since May 25, 1925. The encountering of water rather threw a wet blanket over the appearance of the well, but it no doubt has a good chance for coming through for a small well at 1,417 feet. An accompanying plat on this area shows dry holes surrounding the discovery, also showing there is plenty of room for a large pool in case this well does prove an opener.

W. A. Moncrief and others have made two more locations in this area, one on the J. S. Todd ranch in Section 29, Block WX, G.C.&S.F. Survey, and one on the H. R. Andrews ranch in Section 57, Block UV, G.C.&S.F. Survey.

The Continental Oil Co., Transcontinental Oil Co., Mid-Kansas Oil & Gas Co., W. A. Moncrief and other independent operators, hold the bulk of the acreage in the vicinity of the well, and other companies will likely purchase protection as near in as they can obtain it. A spurt of buying has already taken place in the area since the showing was encountered the latter part of last week.

Hendricks Extension

The Humble Oil & Refining Co. completed another well on the east side of the Hendricks Pool, extending it slightly by its No. 1-A Walton in Section 48, Block 26. It is located in the northwest corner of the south half of the section offsetting the Amerada Petroleum Corp.'s No. 1 Walton, a gasser to the north. The Humble well topped the pay at 2,850 feet and drilled to a total depth of 3,050 feet, but was plugged back to 3,000 feet and shot with 300 quarts from 2,850-3,000 feet. This started the well flowing 150 bbls. daily. Before shooting the hole stood with 1,500 feet of oil.

O'Mara's No. 1 Butz, located in the west quarter of Section 54, Block 10, H. &G.N. Survey, surprised many when it encountered a showing of oil from 1,338-40 feet and headed every hour, making only 1-bbl. heads. It increased to 4 bbls. per hour later. The hole was bottomed at 1,359 feet, elevation is 2,513 feet. This well lies about 3½ miles south of the Pecos Valley discovery well in Section 22, and there are two dry holes between them, causing the surprise when this new well encountered oil, but it now looks as if most anything may arise in this shallow area, and eccentric happenings may henceforth be expected.

Clayton & Williams' No. 1 Sanford, 160 feet from the northwest and 1,150 feet from the southwest lines of Section 55, 1 mile southeast of the O'Mara well, is shut down at 1,285 feet after encountering a showing of oil and gas here. There is also a possibility of this test making a small well. It is the farthest south test in this area, lying only a mile northeast of the old Quimby tests in Section 592. Some of those wells were small producers, but were abandoned after pumping tests were made for a short time.

Dry Hole Southeast of Yates

Another dry hole was abandoned, on the southeast of the Yates Pool, Pecos County, during the week when the Rio Pecos Oil Co. plugged its No. 2 Yates in Section 543, H.&G.N. Survey. This test was located 5,130 feet from the east, and 510 feet from the south lines, approximately three-quarters of a mile north of the small producer drilled by the Texon Oil & Land Co. in Section 55 on its Yates lease purchased from Kemper

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New Pools in Young and Jack Counties

Big Wells Completed in Gray County. Extensions in Coleman and Brown Counties. Panhandle Production Gains

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 15.—With many big wells completed in Gray County, an increase of over 6,000 bbls. in the Panhandle district, a new discovery in Young County, and a new proven field in Jack County, with more large wells and a small extension in the Morris Pool, Coleman County, and Smith-Ellis Pool, Brown County, the Panhandle, North Texas and North Central Texas are holding their own with the mighty Permian Basin, which has long been the feature writer in the Texas oil industry.

Benson Brothers' No. 1 Havercamp, located 150 feet from the north and west lines of the Havercamp 105-acre tract in the H. N. Burditt Survey, Abstract No. 66, Cooke County, came through making a small producer of 27 bbls. from a total depth of 760 feet after encountering an oil sand at 754 feet, and opened a new pool in the shallow sand in this country. Three other wells were completed in the county during the week, but they bore the sad news of being dry holes and were abandoned.

Young County Discovery

Young County featured a new discovery this week when Stafford's No. 1 Brown topped an oil sand from 554-56 feet last week end and started showing up as a new pool opener. It was completed for a 25-bbl. well at the total depth of 556 feet. The nearest production to this discovery is in the Benson Pool, about 6 miles to the north, and although there are several dry hole surrounding this find, there probably will be several more producers completed in the immediate vicinity. The discovery is located in the SE quarter of Section 290, T.E.&L. Survey, 3 miles west of the town of Jean.

Another feature of Young County was the completion of A. H. Parks and others' No. 1 O. R. Carpenter, 150 feet from the north line and 450 feet from the east line of the SW cor. of the 50-acre O. R. Carpenter lease. Sandy lime was encountered from 578-80 feet, and oil sand was struck from 580-600 feet, the well being completed at the latter depth. It filled up 300 feet in four hours while drilling, later making 80 bbls. the first 24 hours, and the following 24 hours making 60 bbls. while shut in part of the time. The oil tests 39 gravity. This well will also open up quite an amount of new territory, and will call for more shallow drilling in the near future around it.

New Jack County Pools

The Buttram Petroleum Corp.'s No. 1 Boyd is now recognized as a good well, and a new discovery, opening another pool in Jack County, where producers flourish all over the county. It is in the southern part of the I. N. Wright Survey, 2 miles west of the town of Avis and a small pool adjoining Avis on the north. It was put on the pump during the week and pumped an initial amount of 128 bbls. of oil and 16 bbls. of salt water in 12 hours. The oil was first encountered at 2,423 feet and the well completed at 2,425 feet, but afterwards was deepened to 2,426½ feet in white sand. Offset locations have been staked for other wells, and the area is due for a "play" in drilling activities at once.

No other wells were completed in Jack County this week, but there are several which are about terminated, and the following week will no doubt bring forth other producers, with the possibility of other discoveries opening new pools about the county.

Big Producer in Gray

The Phillips Petroleum Corp. brought in a big producer in its No. 3 Palmer, Gray County, which topped the pay at 2,877 feet and was completed for 5,200 bbls. initial production at total depth of 2,880 feet. Several others in the county came in for better than 1,200 bbls., but these are rather small producers at present, in comparison to many that have been coming in better than 4,000 and 5,000-bbl. wells.

Coleman County Activity

Coleman County is one of the most interesting counties in the Ranger district, activities running at a fever heat, with the best producers of the county's history brought forth during the past three weeks.

The White Eagle Oil & Refining Co. is contributing to Coleman's splendid showing, its last strike being on the Morris lands in the Cochran Survey northeast of Coleman about 12 miles. This well is a slight extension to the southwest in the Morris Pool, and is also the best well in the pool as well as the largest in the county, coming in for an initial production of 2,137 bbls. on July 10, from a total depth of 2,025 feet, after encountering the Fry sand at 2,018 feet and starting to flow at the rate of 65 bbls. per hour, later increasing to the above production gauge.

Another late producer in this field is Tarver & McKenna's No. 1 J. J. Crowder, approximately 2,000 feet south of the White Eagle well in J. H. Wood's Survey No. 483. A gas sand was encountered from 1,968-73 feet and the well shut down at 1,974 feet, gauging 2,000,000 feet of gas. This later increased to 5,000,000 feet. It is shut down to cement casing and will be drilled in during the following week.

Eastland Oil Co.'s No. 7-A Morris is next to the last well to be brought in in this pool, coming in for an initial production of 156 bbls. in 13 hours from a total depth of 1,999 feet after topping the oil sand at 1,989 feet.

All of these good wells, coupled with some of those which have been completed in the past three weeks, make this pool look like one of the best, if not the best in Coleman County, with the possibility of other good sized wells being brought in later, for there is plenty of room for more drilling, with the pool still undefined in three directions.

The following figures are given to show the daily average production, at present, in the various pools of Coleman County: Morris Pool, 3,800 bbls.; Cheney-Continental-Overall Pool, 1,000 bbls.; Burkett area, 700 bbls.; Weaver area, 300 bbls.; Jennings Pool, 300 bbls.; Santa Anna Pool, 150 bbls.; Taylor-Link Pool, 100 bbls.; Roth & Faurot, southeast of Coleman, 100 bbls.; Gladys Belle Pool, 80 bbls.; Dibrell Pool, 75 bbls.; miscellaneous, 100 bbls.

Brown County Extension

Brown County also gained recognition in the light of an extension this week when S. B. Owen's No. 1 Cannon, located 150 feet from the south and east of the north 200 acres of the Edmonson farm in the W. Arenbeck Survey No. 3, struck the Fry sand from 1,134-44½ feet and produced 25 bbls. after a shot of 4 quarts in the pay formation. This well is an extension of the Smith-Ellis Pool.

Gray County helped raise the Panhandle district daily average from 79,155 bbls. last week to 85,870 bbls. this week, when Gray went 7,115 bbls. over last week's figures. This was caused by several big flush producers being completed. The other counties of the district either held their own or fell off slightly, with Gray County carrying the burden of holding up the Panhandle's figures.

The Wichita Falls district rode along about the same as last week in production, with but the small increase of 1,373 bbls., which was distributed about over several counties which raised their own production slightly.

The Ranger district did not show up as well as the Wichita Falls district, only gaining 555 bbls. for the whole district over last week's figures. But the large wells in the Morris Pool did not show

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WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending July 15

Company, well, farm, name, section and block—	Remarks—
CARSON COUNTY	
Delmar Oil Co.'s No. 4 Nail, 330 ft. from N line, 330 ft. from W line of W½ SE, Sec. 198, I.&G.N., Blk. 3	Drlg. 3,050 ft.
Empire G. & F. Co.'s No. 1 Deahl, 660 ft. from N line, 660 ft. from W line, Sec. 21, Blk. Y-2	Drlg. 2,338 ft.
Gulf Prod. Co.'s No. 1 Garner-B, 330 ft. N and W SE cor. SW, Sec. 106, Blk. 4, I.&G.N.R.R. Sur.	Drlg. 2,112 ft.
Gulf Prod. Co.'s No. 7 Noel, 330 ft. S and W NE cor. SW, Sec. 198, Blk. 3, I.&G.N. Sur.	Drlg. 2,365 ft.
Herragan Oil Co.'s No. 1 L. C. McConnell, 330 ft. N and W line W½ SW, Sec. 187, Blk. 3, I.&G.N. Sur.	S.D. 1,235 ft; setting 10-in. csg.
Magnolia Pet. Co.'s No. 7 fee, 990 ft. from W line, 990 ft. from S line SE, Section 91, Blk. 4, I.&G.N. Sur.	S.D. 245 ft; running 10-in. csg.
McConnell O. & G. Co.'s No. 1 McConnell, 330 ft. from N line, 330 ft. from E line W½ NE, Sec. 65, Blk. 4, I.&G.N.R.R. Sur.	Fish. 2,917 ft.
Midwest Explta. Co.'s No. 2 Cooper, 990 ft. from S line and 330 ft. from W line W½ NW, Sec. 5, Blk. 9, I.&G.N. Sur.	S.D. 2,543 ft; pulled in rig.
Midwest Explta. Co.'s No. 3 Cooper, 990 ft. S and 330 ft. E NW cor. W½ NW, Sec. 5, Blk. 9, I.&G.N.R.R. Sur.	Drlg. 500 ft.
Morris et als' No. 1 Barnard, NW cor. SW SE, Sec. 44	2,000,000 ft. gas 2,752-62 ft; S.D. 3,388 ft; shot 380 qts. 3,130-3,275 ft; C.O.
Ryan Oil Co.'s No. 3 Black, 990 ft. from S line, 330 ft. from E line NE, Sec. 111, Blk. 4, I.&G.N.R.R. Sur.	Running 8-in. csg. 2,140 ft.
Ryan Oil Co.'s No. 4 Block, 990 ft. from N line and 330 ft. from E line NE, Sec. 111, Blk. 4, I.&G.N. Sur.	Drlg. 1,260 ft.
Skelly Oil Co.'s No. 15 Schafer, 330 ft. from S line and 330 ft. from W line NE, Sec. 198, Blk. 3, I.&G.N.	Drlg. 2,520 ft.
Stubblefield et als' No. 1 Garner, 330 ft. from S and E lines SE, Sec. 104, Blk. 4	Drlg. 110 ft.
Timmis et als' No. 2 Garner, 330 ft. from N line and 330 ft. from E line SW SW, Sec. 113, Blk. 4, I.&G.N.	S.D. 2,060 ft; U.R. 8¼-in. csg.
Travis et als' No. 1 D. A. Harrel, C NE NE, Sec. 162, Blk. 7, I.&G.N. Sur.	250,000 ft. gas from 3,520-30 ft; C.O. 3,780 ft.
CASTRO COUNTY	
Colorado O. & R. Co.'s No. 1 M. Slemmons, SW cor. Sec. 73, Blk. M-17, B.S.&F. Sur.	Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE, Sec. 333, Blk. M-6, S.K.&K. Sur.	S.D. 510 ft. for csg.
CHILDRESS COUNTY	
C. L. Sloane et als' No. 1 B. P. Smith, Sur. 49, F. P. Knott lands	S.D. 4,486 ft.
COCHRAN COUNTY	
Marland Prod. Co.'s No. 1 Slaughter-A, 330 ft. from W and 430 ft. from S lines, League 130, Carson County School land	Drlg. 3,110 ft.
COTTLE COUNTY	
Explta. Co.'s No. 1 Richards	Csg. stuck 3,612 ft.
Explta. Co.'s No. 4 Matador Land & Cattle Co., C, Sec. 46, J. H. Stephens Sur.	S.D. 3,227 ft.
Sun Oil Co.'s No. 1 T. B. Yarborough, 455 ft. S and 2,460 ft. E NW cor. Sec. 551, Blk. H, W.&N.W. Sur.	Coring 4,288 ft.
DONLEY COUNTY	
Blue Bonnett Oil Co.'s No. 1 Ball, 1,075 ft. from N line, 985 ft. from E line, Sec. 32, Blk. E, D.&P.R.R. Sur.	S.D. 1,912 ft.
Marine Oil Co.'s No. 1 Sawyer, C SW, Sec. 5, Blk. G, G.C.&S.F. Sur.	Drlg. 3,300 ft.
GRAY COUNTY	
Anderson et als' No. 1 Vallmert, 330 ft. from S, 330 ft. from W, Sec. 140, Blk. 3, I.&G.N. Sur.	Rigging up.
Amagray Oil Co.'s No. 2 Chapman, 330 ft. S and W NE cor. W½ SW, Sec. 9, Blk. 26, H.&G.N. Sur.	Drlg. 3,015 ft; show gas 2,025-2,130 ft. and 2,230-50 ft; 30,000,000 ft. gas 2,315-20 ft.
British-American Oil Co.'s No. 2 Purviance, 330 ft. N and E SW cor. E 160 ac., Sec. 61, Blk. B-2, H.&G.N.R.R. Sur.	Location.
Champlin Ref. Co.'s No. 2 Jackson, 330 ft. each way from SE cor., W 100 ac., Sec. 60, Blk. B-2, H.&G.N.	Drlg. 3,020 ft; sprayed 5 bbls. T.P. 2,920 ft.
Crabtree Drlg. Co.'s No. 1 B. F. Talley, SW NE, Sec. 114, Blk. M-2, B.S.&F. Sur.	S.D. 2,740 ft.
Constantine et als' No. 1 Dial, 330 ft. S and E of NW cor. W½ NW, Sec. 32, Blk. 25, H.&G.N. Sur.	S.D. 2,965 ft; encountered salt wtr.
Danciger O. & R. Co.'s No. 4 Morse, 330 ft. S and E NW cor. NW SW, Sec. 1, Blk. 26, H.&G.N. Sur.	Spraying 2 bbls. per hr. 2,447-62 ft; 1,500,000 ft. gas; S.D. 2,554 ft; S.O. 2,447-52 ft., 2,486-93 ft. and 2,493-2,504 ft; to put on pump.
Danciger O. & R. Co.'s No. 2 Beck, 330 ft. N and E SW cor. NW, Sec. 28, Blk. B-2, H.&G.N. Sur.	Drlg. 1,111 ft.
Danciger O. & R. Co.'s No. 3 Beck, 330 ft. S and 990 ft. E NW, Sec. 28, Blk. B-2, H.&G.N.R.R. Sur.	Drlg. 2,280 ft.
Danciger et als' No. 1 Sheridan, SE cor. Sec. 184, Blk. B-2, H.&G.N.R.R. Sur.	Temp. abd.
Danciger O. & R. Co.'s No. 1 Williams, 330 ft. from N, 330 ft. from E, S½ NW	Drlg. 350 ft.
Delaney and Associates Oil Co.'s No. 3 Jackson, 990 ft. S and 330 ft. E NW cor. E½ SW, Sec. 38, Blk. B-2, H.&G.N.R.R. Sur.	Drlg. 1,925 ft.
Bob Dunlap's No. 2 Morse, 990 ft. from N, 330 ft. from W, Sec. 2, Blk. 26	Spudding 150 ft.
Empire G. & F. Co.'s No. 1 Noel, C SE, Sec. 151, Blk. 3, I.&G.N.R.R. Sur.	Drlg. 860 ft.
Sines & Reiger's formerly Eslick et als' No. 1 Mrs. J. A. Hopkins, NW cor. W 80 ac. of SW, Sec. 84, Blk. B-2, H.&T.C. Sur.	S.D. 3,206 ft.
Gardner Bros. and Collins' No. 2 Saunders, 955 ft. from S and 330 ft. from E of W 68 ac. E½, J. G. Bustice Sur.	Location.

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A City of Warehouses

To Serve The Oil Industry

The warehouses of the Kirk-Morrow Iron Works Company, (formed to take over the Iola, Kansas, plant of the United Iron Works, Inc.) if gathered together, would make a small city. From these warehouses, which we keep fully stocked at all times, our three sales offices and large field personnel faithfully supply our customers.

The warehouses are located as follows: KANSAS--Valley Center, El Dorado, McPherson. OKLAHOMA--Maud, Seminole, Sasakwa, Tulsa, Oklahoma City. TEXAS--Big Spring, Borger, Pampa, Panhandle, Pyote, Trent, Santa Rita. ARKANSAS--El Dorado, Smackover. WYOMING--Casper, Parco, Cody. CANADA--Okotoks, in Alberta.

PRODUCTS

Steel Tankage, Tank Fittings, Steel Derricks, Rig Irons, Bull Wheels, Calf Wheels, Band Wheels, Crown Blocks, Tug Wheels, Sand Reels, Refinery, Equipment, Stills, Steel Plate Construction.

THE KIRK-MORROW IRON WORKS COMPANY

General Offices: Iola, Kansas
Sales Offices: Hunt Bldg., Tulsa, Oklahoma; Magnolia Bldg., Dallas, Texas; Brown Bldg., Wichita, Kansas.

Pipe Line Construction News

SURVEY NOW COMPLETED FOR FALLS CITY, NEB., LINE

Survey for an extension of Cities Service Gas Co.'s main pipe line system from Atchison, Kans., to Falls City, Neb., by way of Horton and Hiawatha, Kans., has been completed by Empire engineers. The route is staked and right of way maps are in preparation.

The new line will be approximately 53 miles long and constructed of 6-inch pipe. Franchises for the distribution of natural gas in the cities touched by the line are being asked by Gas Service Co.

This is only one of the many projects the Cities Service Gas Co. has in view of extending its main lines to points in this, and other areas, that do not, at the present time have the advantage of this natural fuel.

From Ottawa junction north to the Topeka tap, a distance of 18 miles, the 16-inch main gas pipe line now in use will be reclaimed and a new 18-inch line laid. Also 15 miles of the 12-inch pipe line from the Topeka tap toward the Kansas capital will be reclaimed and relaid with 16-inch pipe.

This is in line with the company's policy to spend annually large sums of money in reconditioning and reclaiming its main lines. The entire project, while extending the main pipe line system, will increase the potential deliveries of natural gas to Topeka, Lawrence, Leavenworth, Atchison and other cities in northeast Kansas.

TEXAS PIPE LINE CONSTRUCTION

FORT WORTH, Tex., July 15.—The Texas Pipe Line Co. has let contract for 46 miles of 6-inch screw pipe line for an extension of its line from its Jal pumping station to The Texas Company's No. 1 Lynch in Section 34-20s-34e.

The Gulf Pipe Line Co. is looping its 10-inch line from its Midland tank farm to station and tank farm at Ranger, raising total capacity from 25,000 bbls. to around 50,000 bbls. daily.

It is generally understood that the Humble Pipe Line Co. will run a gathering line from its station in the Yates Pool, Pecos County, to the Taylor-Link No. 1 University, located about 18 miles southwest in the same county, in Section 30, Block 16, University Survey. The production is now going to storage at the rate of 140 bbls. daily and an outlet will have to be built to handle it. Other tests now being drilled in the area will probably need an outlet, and as the Humble Pipe Line Co. has the largest gathering and pipe line system in West Texas it no doubt will lay the needed line.

DISTRIBUTOR MAY LAY LINE

SAN FRANCISCO, Calif., July 13.—Announcement to the State Railroad Commission by Reginald Vaughan, attorney for Coast Counties Gas & Electric Co., that this company plans to build its own pipe line from oil fields into central California territory unless the present controversy between other companies is settled shortly, injected a new angle into the situation.

Pacific Gas & Electric Co. and Western Natural Gas Co. are both seeking to serve Coast Counties company with natural gas from Kettleman Hills for distribution through its systems. The only interest previously expressed by Coast Counties Gas & Electric was to prevent the entrance of a competitor into its distribution field in Contra Costa County industrial district.

The company now announces it will get its own gas unless the situation is clarified in summary fashion.

MISSOURI-KANSAS ADDS TO ITS DISTRIBUTION

Gas supplied to Kansas City, Mo., by the Missouri-Kansas Pipe Line Co. was increased approximately 1,000,000 feet per day when a new 6-inch main was opened from the Bannister Ridge drilling area, adjacent to Kansas City. This raises the company's total daily sale of natural gas for Kansas City consumption to nearly 6,000 000 feet. On a maximum contract for 12,000,000 feet per day the company also supplies the local gas companies at Belton, Martin City and Grandview, Mo., and at Paola, Ossawatomie, Bucyrus, Somerset, Louisburg and Chanute, Kans.

On Monday, July 15, the company began servicing Owensboro, Ky., from its

Burt Bay

new Kentucky natural gas fields on a contract basis of 1,000,000 feet per day. On July 29 it will inaugurate natural gas service for Independence, Mo., from nearby shale fields.

Burt Bay became general manager of the Missouri-Kansas Pipe Line Co. on July 1, resigning the general superintendency of the gas division of the Empire Gas & Fuel Co. at Bartlesville, Okla., to accept the position. His headquarters will be in Kansas City.

With the Missouri-Kansas, Mr. Bay will serve chiefly as operating manager in direct charge of the company's interests in Kansas, Missouri and Kentucky, his experience having been confined principally to the production end of the business for more than 21 years.

GATHERING LINE FROM JAL

The Texas Pipe Line Co. is running a gathering line from its tank farm at Jal, N. Mex., to its Lynch and Sheppard wells, the former located in Section 34-20s-34e, and the latter in Section 6-26s-36e. Production from these wells will help fill up the trunk line of The Texas Company, which runs from Jal, N. Mex., to Port Arthur, Tex.

COMPLETING SHIPLEY LINE

The Atlantic Pipe Line Co. has nearly completed its 6-inch 16-mile line from the Shipley Pool in southern Ward County to loading rack and connection at Pyote. This line will be the second one to serve the Ward County Field, the Wickett Pipe Line Co. already having a 4-inch line running oil to the Wickett Refining Co.'s refinery at Wickett.

PIPE MILLS INTERESTED IN PROPOSED GAS LINE

By B. E. V. Luty

PITTSBURGH, Pa., July 15.—The principal one of the several natural gas piping projects mentioned in a general way a week ago is the one to pipe gas from Texas to Chicago. Such a line would be nearly 1,000 miles long and would doubtless be 20-inch or larger, making the pipe order by far the largest ever placed, say in the neighborhood of 150,000 tons net.

Other natural gas piping is coming into prospect by reports that work is well along looking to a consolidation of the gas portions of the Columbia Gas & Electric Co. and the Cities Service Co., the object being to develop the gas by piping it to the Atlantic Seaboard, chiefly Philadelphia and New York. It is definitely stated that the natural gas would not be sold pure, but would be used to enrich manufactured gas.

The rate of steel ingot production in June was substantially equal to that of May. By the conventional system of figuring there was only a small fraction of 1 per cent decrease in the daily rate, but this does not allow for the fact that there were five Sundays in June and in these times of heavy pressure for steel open hearth is made on Sunday though probably not Bessemer. By strict figuring there was a slight decrease in the rate, but this occurred by open hearth furnaces failing after a the long spell of hard driving, and not from lack of demand.

All the indications are that there are requirements for all the open hearth steel and nearly all the Bessemer steel that can be made this month, with near-up as strong a case for August. From physical causes a few per cent decrease in the rate of production is to be expected.

In the year to July 1 production of steel ingots has been approximately 54,675,000 gross tons, which is more than 15 per cent above production in any preceding period of 12 consecutive months, however selected as to ending. In recent years the average annual gain in steel production has been, say 3 to 4 per cent, and this sudden jump is therefore phenomenal. Moreover, production is now running much heavier than a year ago, and the 12 months through July will show about a million tons more than the 12 months through June.

There is no visible indication that steel demand is dropping off or will, except for the seasonal decrease in automobile production that has just occurred and the seasonal decrease in rail production that will have occurred by September 1. At the same time there is room for doubt about the continuance of such an exceptional pace. A return to the normal rate as indicated by the average of the past few years would represent quite a decrease but would still represent a heavy production from the long-range viewpoint.

The National Automobile Chamber of Commerce reports car and truck production in the United States and Canada in June at 536,000, against 635,528 officially reported for May. The June production was 3 to 4 per cent lighter than would be expected by counting upon the average May to June decrease that has occurred in the past five years. Production in the 12 months through June was 5,655,000, against 3,706,078 in the 12 months preceding, or 53 per cent increase. The highest year ending in June was that ended June, 1926, with 4,665,925, while the highest calendar year prior to 1928 was 1926, with 4,505,661, while the calendar year 1928 was 4,601,141. Thus it is clear the real jump in automobile production occurred at the middle of last year, as was the case with steel. At the same time line pipe became still more active and just previously fabricated structural steel had a climb. Also the agricultural implement industry has had an exceptional 12 months.

Steel orders in general are coming in at a materially lower rate than in June, when there was a small decrease from May, but the majority of mills have an unusually large backlog of business to carry them over the next few weeks.

A. N. HORNE APPOINTED EMPIRE SUPERINTENDENT

The appointment of A. N. Horne as general superintendent of oil pipe lines is announced by E. K. Haskell, manager of the Empire Pipe Line Co.. Mr. Horne succeeds R. A. Nelson who died June 26.

Mr. Horne joined the Doherty organization at Meridian, Miss., January 1, 1919, as the result of a story about the company in a popular magazine. He had served with the tank corps in the World War.

"Just before leaving the service at Camp Dix," said Mr. Horne, "I was reading in the American magazine a story of Henry L. Doherty and his training school system. It appealed to me, and I wrote for a job."

From the meter department at Meridian, he was transferred to Bartlesville as a junior engineer in June, 1919, taking permanent assignment to the oil pipe line division the following year. He served as time keeper, field gauger, and district foreman in the Duncan, Okmulgee and Ponca City districts. Early in 1927 he was made superintendent of operations out of Bartlesville.

He entered Mississippi A. and M. College in 1914, and working his way through, was graduated in electrical engineering in December, 1917.

PIPE LINE MEN MEET

At a meeting of the Empire oil pipe line superintendents and assistant superintendents in Bartlesville, Okla., July 11, various phases of pipe line operations were discussed. F. K. Haskell, manager of the division, and Floyd C. Brown, assistant general manager of the Empire companies, made short talks. It was planned to hold meetings of superintendents at least once each year in Bartlesville.

The field men attending were: A. E. Stewart, El Dorado; C. A. Mason, El Dorado; Thomas Cole, Madison; P. O. Teter, Ponca City; Joe Ham, Seminole; William Bayman, Ponca City; J. W. Fagan, Ponca City; A. J. Dean, Healdton; N. G. Moore, Ponca City, and T. J. Flanagan, Cushing.

COMPRESSOR HALF FINISHED

MONROE, La., July 13.—Work on the $1,000,000 gas compressor station at Glendale, 21 miles south of Pine Bluff, by the Mississippi River Fuel Corp., which is constructing a gas pipe line from Monroe to St. Louis to supply that city with fuel, is half completed. On a 12-acre tract the company has 200 men at work. Erection of a 100,000-gallon water tank was completed Saturday and work on two wells is now completed.

TRUNK LINE TO DENISON FIELD

The Lone Star Gas Co. has finished its trunk line to the Denison Gas Field and is now furnishing gas to parts of East and North Texas and Oklahoma.

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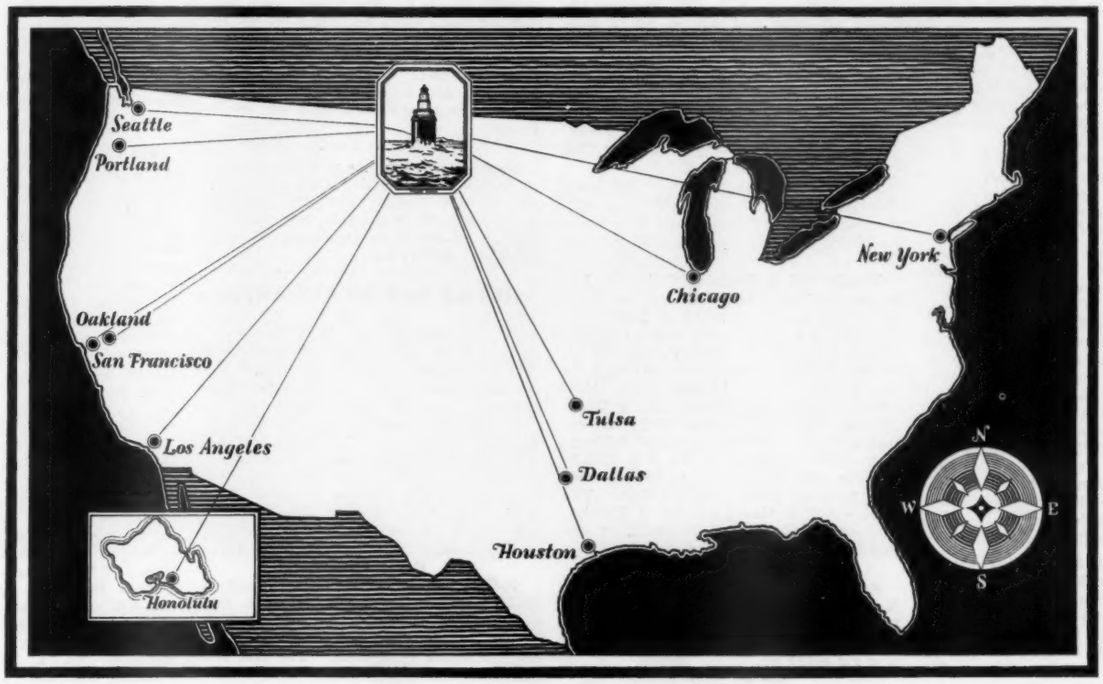

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Added prestige has come as the reward of the progressiveness which is responsible for the introduction of a new standard of pipe protection—the mechanical coating and wrapping of pipe. Since October of last year more than 3,000 miles of mechanical coated and wrapped pipe have been shipped from six plants located adjacent to the larger pipe mills of the country. The uniformly greater protection afforded through this modern method again distinguishes this latest Hill, Hubbell & Company development as it has in the past distinguished their entire line of color paints, enamels, varnishes, and specialties.

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KANSAS FIELDS

(Continued from Page 52)

cured light well to the north and northeast. The Shell Petroleum Corp.'s No. 1 Norton, a diagonal offset to the northwest, was a small well in the same pay sand.

The Empire Oil & Refining Co. spudded in its semiwildcat test, No. 1 Parks, NE cor. NW Section 36-29-4, Butler County, 4 miles west of Douglass.

Southern Sumner County

In spite of the heavy rains which have made some of the streams at least 2 miles wide in places, some progress was noted in the several drilling tests in the Gueda Springs district in Sumner County. In the southern part of this district, the Prairie Oil & Gas Co.'s No. 4 Olsen, which came in making 100 bbls. an hour a short time ago, is down to 300 bbls. a day and is making the same amount of water. In spite of the water, the company is drilling its No. 5 Olsen, a diagonal offset, in the SE cor. NW NW Section 3-34-2. A mile and a half to the west the Tidal Oil Co. is drilling No. 1 McCutcheon, SW cor. Section 33-34-2, now drilling at 1,750 feet.

The Hamilton Pool appears to be cut off with a dry hole on the north side of the pool in Greenwood County. The Transcontinental Oil Co.'s No. 1 Holland, in the NE of Section 36-23-11, appears to be dry in the Bartlesville sand at 1,808-14 feet, where it had a small showing of oil and is drilling deeper at 1,860 feet. This cuts off Bartlesville sand production north of the Empire Oil & Refining Co.'s No. 1 Patterson, in the NW cor. NE SW Section 36-23-11, which is still making 300 bbls. a day. The same company's No. 2 Patterson, SE NE SW Section 36-23-11, is fishing casing which has delayed its completion.

Butler County

White Eagle Oil & Refining Co. is building the rig for No. 1-A Stone, NE cor. NW SW, Section 2-25-5. Lario Oil & Gas Co. has the rig up for No. 1 Lancer, NW cor. Section 15-26-3. Empire Oil & Refining Co. made location for No. 11 Cranston, SW cor. NE SE, Section 22-27-5. H. B. Garden has the rig up for No. 3-C Sluss, CEL NW NE, Section 6-27-6. Blaksley & Wentz's No. 1 Getter, NW cor. NE SE, Section 6-28-6 is a rig.

Shell Petroleum Corp.'s No. 1 Thiesen, SE cor. SW SE, Section 10-24-3 is dry and abandoned at 3,023 feet. Empire Oil & Refining Co.'s No. 16 Huston, SE cor. NW SW, Section 19-26-5, has been completed for 100 bbls. in Viola lime 2,620-705 feet. Phillips Petroleum Co.'s No. 1 Landon, C SE NW, Section 36-27-5.

Cowley County

Tulsa Oil Co. made location for No. 1 Coalielzier, SW cor. SE, Section 4-30-5. Clerance & Rieter's No. 1 Claybaugh, SE cor. NW NE, Section 19-31-5, is a rig moving in. Skelly Oil Co. is erecting the rig for No. 1 Youle, NE cor. SE NE, Section 16-32-4. Trees Oil Co. has the rig up for No. 1 Brubaker, C SW NE, Section 12-34-6. The Prairie Oil & Gas Co. is rigging up to deepen No. 1 De Mott, SW cor. NE, Section 14-34-4.

Rider and others' No. 1 Franks, NE cor. NW NW, Section 30-31-5, has been abandoned at 600 feet. Minnehoma Oil Co. and others' No. 3 Ferguson, NE cor. SE, Section 4-31-8, is producing 100 bbls. from sand 1,955-75 feet. J. A. Hull's No. 6 Bartlow, NW cor. SW NW, Section 19-32-5, made a 100-bbl. well in sand 3,000-66 feet. Independent Oil & Gas Co. and Vickers Petroleum Co.'s No. 3 Youle, NW cor. NE NE, Section 16-32-4, has been completed for 250 bbls. in Siliceous lime 3,276-80 feet. The Prairie Oil & Gas Co. and others' No. 2 Mitschler, NE cor. SE SE, Section 9-32-4, swabbed 150 bbls. from sand 3,297-3,306 feet. No. 3 Mitschler, SW cor. SE SE, Section 9-32-4, made 400 bbls. from sand 3,310-15 feet. No. 6 Youle, NW cor. SE NW NW, Section 15-32-4, swabbed 200 bbls. at 3,257 feet.

Dickinson County

T. C. Johnson's No. 1 Setweleir, SW cor. NE NW, Section 32-16-4, is dry and abandoned at 3,020 feet.

Ellis County

Thomas & Moncrief's No. 1 Strailey, NW cor. SE, Section 9-13-19w, is a rig under construction.

Greenwood County

Empire Oil & Refining Co. is building the rig for No. 2-B Patterson, CWL SW NW, Section 36-23-11. Shaffer & Howell's No. 15 Snyder, CNL NE NW, Section 15-23-13. Sheedy and others' No. 3 Sharp, C N half N half, Section 5-24-13, is drilling at 1,600 feet. Lassen and others' No. 2 Gregg-Coulter, NE cor. SE NW, Section 6-25-9, is spudding. Ward & McGinnis made location for No. 1 Anderson, NE cor. NW SW Section 13-25-10. Bisagno and others' No. 2 Ralston, SW cor. NE, Section 9-25-13, is a cellar. O. V. Paul and others' No. 1 Cross, SW cor. Section 6-27-11, is rigging up. Mohawk Oil Co.'s No. 5 Grundy, C SW NW Section 7-27-11, is rigging up. Conkey, Bridgman and others' No. 1 Rock, NW cor. NE NE, Section 7-27-12, is spudding.

The Prairie Oil & Gas Co. made location for No. 2 Webber, NW cor. SE, Section 9-25-13. Location has been made for No. 1 Pees, NE cor. SE NW, Section 12-24-12.

Empire Oil & Refining Co.'s No. 1-B Pixlee, SW cor. NW SE, Section 9-22-10, is dry and abandoned at 2,443 feet. Empire Oil & Refining Co.'s No. 1-B Patterson, SE cor. SW NW, Section 36-23-11, has been completed for 200 bbls. in Bartlesville sand 1,849-65 feet. Mid-Continent Petroleum Corp.'s No. 4 Geise, NE cor. NW SW, Section 13-24-12, was completed for 15 bbls. in sand 1,710-20 feet. Roth & Faurot's No. 1-C Welch, NE cor. SE SE, Section 13-25-8, is a 6-bbl. well in sand 2,458-73 feet. The Prairie Oil & Gas Co.'s No. 1 Parrish, NW cor. NE, Section 16-24-12, is dry and abandoned at 1,721 feet.

Harvey County

Superior Oil Corp. made location for No. 1 Regier, SE cor. NW, Section 11-22-3w. Lee Payne and others' No. 1 Ady, NE cor. NW SE, Section 16-24-1, is a rig going up.

Marion County

Empire Oil & Refining Co.'s No. 1 Schilly, SW cor. NE NE, Section 28-19-2, has been abandoned at 3,147 feet.

McPherson County

Mid-Kansas Oil & Gas Co. made location for No. 1 Kuns, C SE SW, Section 11-20-5w.

Reno County

Perry and others' No. 1 Oswald, NE cor. SE, Section 30-22-5w, is dry and abandoned at 4,072 feet.

Saline County

O. A. Boyle and others' No. 1 Thrailkild, SW cor. SE, Section 21-16-1w, is a dry hole at 3,234 feet.

Sedgwick County

Davis & Skelly Oil Co.'s rig is up for No. 12 Wilson, NW cor. SE NE, Section 1-26-1w, Valley Center Pool. John Rogers and others' No. 1 Stollie, SE cor. NW SE SW, Section 15-26-2, on Lot 22, Block 7, Greenwich Townsite, is a rig being built. Plains Oil Co. and others made location for No. 1 Curry, SE cor. SW SW, Section 2-27-1w. C. B. Davis and others moved the rig in for No. 1 Kincaid, NE cor. Section 14-27-1. White Eagle Oil & Refining Co. made location for No. 2 Robbins, SE cor. NE SE, Section 20-28-1. The Prairie Oil & Gas Co. is moving the rig in for No. 1 Bright, NE cor. NW NW, Section 1-26-1w, Valley Center Pool.

J. R. Robertson's No. 1 Stewart, NE cor. NW SW, Section 29-25-1, is dry and abandoned at 3,635 feet. Brandenbury & Hinkle's No. 1 Whiting, NW cor. SW, Section 31-25-1, is a dry hole at 3,475 feet. Bu Vi Bar Petroleum Corp. and others' No. 5 Bright "B," NE cor. SW SW SW, Section 6-26-1, Valley Center Pool, has been completed for 525 bbls. in sand 3,460-68 feet. Plains Oil Co.'s No. 1 Townsite, SE cor. NW SE SW, Section 15-26-2, made 406 bbls. in sand 2,926-30 feet. The Prairie Oil & Gas Co. and others' No. 1 Connell-Wyatt, NE cor. SE SE, Section 3-25-1w, is being abandoned at 3,600 feet. Shell Petroleum Corp.'s No. 1 Community, SE cor. NW SE SW, Section 15-26-2, made 721 bbls. in sand 2,922-24 feet. Hartman & Skaers' No. 1 Hutchinson, SE cor. SW, Section 23-28-3w, is dry and abandoned at 4,235 feet.

Russell County

The Prairie Oil & Gas Co. and others' No. 1 Sellers, SW cor. NE, Section 36-15-13w, made 305 bbls. in Gorham sand 3,350-55 feet.

Sumner County

Champlin Oil & Refining Co. has the rig up for No. 1 Murray, NW cor. SE, Section 9-30-2w. Champlin Oil & Refining Co.'s rig is up for No. 4 Love, SE cor. NW SW, Section 9-30-2w. Blackwell Oil & Gas Co. and others made location for No. 1 Clift, SE cor. NW, Section 26-33-3w. Shell Petroleum Corp. is erecting the rig for No. 1 Armstrong, NE cor. Section 12-33-1. Davis & Harreld Petroleum Co. and others' No. 1 McEowen, SE cor. Section 33-34-2, is a rig on the ground.

Woodson County

Hansan Oil Corp. has moved a machine to the location for No. 2 Simpson, NW cor. SE SW, Section 35-23-14. Mellrase & Sullivan's No. 1 Eckhoff, NE cor. NW, Section 35-23-14, is producing 15 bbls. in sand 1,637-50 feet.

ROCKY MOUNTAIN AREA

(Continued from Page 60)

portant development, and will result in a renewal of interest in the test, which has an extensive bearing on plans for wildcatting in that part of the state.

In Jackson County, the Producers & Refiners Corp.'s No. 1 Hendershot, SE NE, Section 2-6n-81, Pole Mountain area, is drilling at 1,977 feet in hard blue sand, and the Midwest Refining Co.'s No. 21-X Rich, SW NW, Section 9-6n-80, Buffalo Creek, is drilling at 565 feet in brown shale.

Routt County

In Routt County, the Texas Production Co.'s No. 4 Belle Dennis, NE SE, Section 7-6n-86, a deep test on the Tow Creek structure, is shut down at 5,301 feet to repair equipment. The last few feet have been an extremely hard formation. The Midwest Refining Co.'s No. 10 Barmettlor & Clayton, NE NW, Section 4-7n-86, Chimney Creek Dome, north of Tow Creek, a Sundance test, is drilling at 385 feet in gray shale.

In Moffat County, Thomas McLaughlin and others' No. 1 Williams, NW SW, Section 2-3n-92, in the fault block south of the Iles Dome, is drilling at 3,870 feet in lime and is through the Dakota formation, the base of which was at approximately 3,687 feet. On the Iles Dome, the Texas Production Co.'s No. 36 Lloyd, SE cor. Section 21-4n-92, on the southwestern edge of the pool, which was plugged back from the Sundance to the Morrison at 3,640 feet, is cleaning out the hole, which is caving badly. On a swabbing test it made around 30 bbls. from the Morrison. The Midwest Refining Co.'s No. 24-SD Parkinson, SE NW, Section 22-4n-92, on the western edge of the pool, again has been plugged back, this time to 3,492 feet. It filled up 900 feet with oil overnight and swabbed 25 bbls., but is not yet a completion. The McCormick Oil Co.'s No. 1-A Sales, SE SE, Section 28-4n-92, which spudded last winter after skidding the rig, continues to be shut down. The results in No. 36 Lloyd makes this location rather doubtful, as it is lower on the structure and it is possible it may not be drilled.

In Rio Blanco County, the White Eagle Oil & Refining Co.'s No. 1-A Fordham, NW SW, Section 9-2s-96, is drilling out plug after cementing the 12½-inch at 1,270 feet.

In Larimer County, the Continental Oil Co.'s No. 1 Fleming, SE NW, Section 6-9n-68, Wellington Dome, is drilling at 4,120 feet and nearing the objective Muddy sand. This well is testing some new territory on the west side of the structure.

Fremont County

In Fremont County, W. M. Conley's No. 6 Hassler, SE SE, Section 21-20-69, in the south extension of the Florence Pool, was completed at 2,150 feet, and made 25 bbls. on the pump the first 24 hours. The Continental Oil Co.'s No. 6 McKenzie, NE SW, Section 1-19-70, an edge well in the Hell's Half-Acre district, was plugged back from 2,420 feet to 1,845 feet and is being tested.

In Elbert County, the Belmont Oil Co.'s No. 1 Maher, NE SW, Section 4-6s-59, Deer Trail, is drilling at 3,500 feet.

In Jefferson County, near Denver, the Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor. Section 24-4s-69, is bottomed at 3,280 feet and re-running the 6¼-inch, which was pulled to recover a fishing spear. The hole is reported showing a little more gas and no water.

In Lincoln County, the Kelly Oil Co.'s No. 1 State, SE NW, Section 36-14-57, is drilling at 2,100 feet. Considerable oil is showing on the sump, mostly accumulations from small shows in the shale during the past few hundred feet.

WYOMING

The Oregon Basin Field in Park County, Wyoming, has a near completion in Charles E. Orchard's No. 5 Rue, NW SW, Section 28-51-100, on the south dome, which is drilling at 3,850 feet, close to the top of the Tensleep. The Embar, topped at 3,585 feet, showed considerable oil, and the indications for a good well in the deeper sand are favorable. Rig is up for Orchard's No. 7 Rue, SW cor. NW, Section 28-51-100. Mr. Orchard, in addition to operating the several weels he has drilled to the pay, is running oil from the Producers & Refiners Corp.'s No. 1 Frisby, in the northern part of the field. He is shipping out around 1,250 bbls. a day, part of which goes to the Yale Oil Corp. of South Dakota, at Billings. This company recently completed and put into operation a topping plant. It recovers approximately 25 per cent in the light cuts and the remainder is sold to the railroads for fuel oil. The Ohio Oil Co. is starting another well in Oregon Basin on its Sonners' lease in the NE cor. Section 8-51-100, an offset on the west to the Wisconsin Holding Co.'s No. 1 Rousch. The Producers & Refiners' No. 1, Section 29-52-100, is standing with the 15½-inch cemented at 825 feet, and its No. 1 Owens, same section, is drilling at 1,485 feet in shale. On the Frannie Dome, the Midwest Refining Co.'s No. 36 Rosenberg, SE cor. NW, Section 25-58-98, is drilling at 2,896 feet in red shale, and its No. 1 Rosenberg, NE. cor. Section 26-58,98, is drilling in a water sand at 170 feet. The Montana-Wyoming Petroleum Co.'s No. 1, NE Section 28-58-98, is a new operation in the Frannie district. The Cloverly at 1,200 to 1,500 feet, is the first objective. Both of the Producers & Refiners' wells on the South Frannie Dome, are idle. The Ohio Oil Co.'s second well on the Shoshone Dome, near Cody, is getting under way in its No. 1 Burlington, Section 21-53-101, which is drilling at 370 feet.

In Big Horn County, the Producers & Refiners' No. 3, NW NW Section 24-56-98, on the Garland Dome, joint with the Kinney Coastal Oil Co., is drilling at 3,756 feet, near the bottom of the red beds. It is getting close to the first objective, and coring into the Embar is expected to begin shortly. The Ohio Oil Co.'s No. 1 Easton, Section 33-56-97, Byron Dome, is drilling at 2,156 feet. This well will probably go down to the Amsden, which has never been tested on this structure. The Cody Petroleum Co.'s No. 1 Wilcox, NW SW, Section 27-57-96, on the Cowley Dome, has been shut down for the past two months at 1,320 feet. It is reported that the company is endeavoring to have reinstated two permits on the structure which were cancelled recently. J. E. Scanlon's No. 1, Lot 16, Section 10-51-92, on the Torchlight Dome, a deep test, is drilling in the red beds at 3,000 feet and is believed to be near the top of the Embar.

Hot Springs County

In Hot Springs County, the Midwest Refining Co.'s No. 8, NW SE, Section 6-44-98, on the Wagonhound Dome, is rigging up, and the Texas Production

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Benavides, Texas
El Dorado, Arkansas
Seal Beach, California

Co.'s No. 1, Skelton Dome, NW SW, Section 23-45-100, is drilling at 2,817 feet.

In Natrona County, C. E. Starr and others are starting a shallow well on the NE SE, Section 5-33-79, north of Casper, where they have 15,000 acres blocked up. The first objective is expected at 1,000 feet. The Prairie Oil & Gas Co.'s No. 1 Baird, NE cor. SW, Section 22-31-81, on the Clark Dome, is cleaning out at 1,500 feet, and the Fargo Western Oil Co.'s No. 11, NE NW, Section 3-33-83, Poison Spider Dome, has 150 feet of oil standing in the hole at 2,600 feet, 15 feet in the Tensleep sand. It is drilling deeper.

In Albany County, the Midwest Refining Co.'s No. 17, NW SE, Section 6-20-77, a new test on the Diamond Dome, is drilling at 200 feet.

In Fremont County, P. B. Dykeman and others' No. 1, Section 18-27-95, Little Buffalo Basin, is drilling below 500 feet and a gas is expected at 825 feet. The operators are developing a supply of gas for the Standard Carbon Co., which the same interests incorporated recently with a capital of $140,000, and which proposes to move a carbon plant at Kirby to the field as soon as a sufficient supply of gas is developed. Several years ago the Prairie Oil & Gas Co. drilled several wells in Little Buffalo Basin and developed an open flow of between 10,000,000 and 30,000,000 feet of gas. One of these wells showed for about 25 bbls. of oil per day at a depth of 2,600 feet. The Producers & Refiners' No. 2 Muskrat, SE NW, Section 33-34-92, is taking down tools at 532 feet, and its No. 3, Section 1-33-92, is doing the same thing at a depth of 510 feet. The same company's No. 2, Section 9-32-95, Sand Draw, has recovered three points of the string of 5⅞-inch casing which parted. Total depth is 3,762 feet. The Kinney-Coastal Oil Co.'s No. 1 Dykeman, SE SW, Section 22-3n-1w, Pilot Butte, is bottomed at 3,014 feet and preparing to run the 8¼-inch.

One of the best completions in the La Barge Field, in Sublet County, reported for some time, was the California Petroleum Co.'s No. 7-D, Section 34-27-113, which flowed 240 bbls. first 24 hours from a total depth of 817 feet. The California Co.'s No. 1 Wyss, NE SW, Section 12-32-115, South Cottonwood, is drilling at 2,183 feet in light gray shale.

In Sweetwater County, the Mountain Fuel Supply Co.'s No. 1 Newberry, SE cor. Section 13-12-100, Hiawatha Dome, is running the 10-inch at 1,700 feet, and its No. 1 Humphreys, Section 2-12-101, Canon Creek, is fishing for bailer at 4,033 feet. Same company's No. 1 Arnold, NE Section 24-19-104, Middle Baxter Basin, is drilling at 3,518 feet, and its No. 1 Murphy, Section 26-17-104, South Baxter Basin, is drilling at 1,200 feet.

Carbon County

In Carbon County, the Producers & Refiners Corp.'s No. 7, Section 7-26-89, on the Wertz Dome, which was reported a completion as a gasser last week at 3,658 feet, gauged 40,000,000 feet open flow. Its No. 8, on the same section, is coring in sand and shale at 3,958 feet. This last named well had 69,000,000 feet of gas in the Lakota at 3,497 feet. The Producers & Refiners' No. 1, NE NE, Section 14-25-89, Sherrard Dome, is bottomed at 3,477 feet and preparing to plug back. It had considerable gas in the Frontier. The Lake Valley Oil Co.'s No. 1, SE Section 14-20-88, on the Eight Mile Lake structure, which has been standing at 4,915 feet since 1927, is being abandoned. Mike Lundy's No. 1, SW Section 34-20-78, an edge test in the Rock Creek Field, topped a brown sand at 4,290 feet and oil rose 1,100 feet in the hole. It will be tested. It is probably in the Lakota.

In Lincoln County, the Midwest Refining Co.'s No. 1 Little Gray River, Section 25-37-117, is bottomed at 999 feet and cleaning out. The 12½-inch is at 843 feet. Same company's No. 1 Waterfall, Section 35-22-115, is drilling at 3,640 feet in red and gray sandy shale. The Italo-American Petroleum Corp's No. 1 Nell, Section 14-24-113, Fontanelle structure, set the 15½-inch at 105 feet. This is sometimes known as the B. E. Taylor operation.

ROCKY MOUNTAIN FIELDS
Daily Average Pipe Line Runs Week Ending July 13

WYOMING	
Salt Creek	31,040
Frannie	50
Big Muddy	2,300
Oregon Basin	5,620
Byron	....
Dutton	30
Elk Basin	670
Ferris	....
Grass Creek	2,080
Greybull	....
Hamilton	1,000
LaBarge	1,760
Lance Creek	210
Lost Soldier	3,900
Osage	560
Poison Spider	900
Rock River	2,410
Rex Lake	90
Lander	360
Simpson Ridge	60
Teapot Dome	30
Mule Creek	650
Total	53,720
MONTANA	
Cat Creek	1,450
Kevin-Sunburst	6,860
Pondera	3,200
Lake Basin	90
Total	11,600
COLORADO	
Moffat	1,467
Fort Collins	3,148
Florence	873
Iles	1,729
Tow Creek	477
Boulder	25
Rangely	100
Total	6,819
NEW MEXICO	
Artesia	845
Cap Rock (Maljamar)	454
Hogback	100
Rattlesnake	1,374
Table Mesa	....
Total	2,773
Grand total	74,912

MONTANA

In the Sunburst Field the high light of the week was the strike of a gas flow with some oil in the Potlatch deep test. This well found a strong gas flow at 4,554 feet and some oil with the gas, just what sand this may be is a question though it is considered by many to be Devonian formation. The strike makes certain that the Sunburst area and northern Montana carries petroliferous horizons below the Madison lime. This deep test is on Section 21-34-1. The oil showing is a black crude, but the quantity is hard to determine since the well was carrying some water that fills the hole faster than the oil comes in.

Two other completions in the Sunburst Field were gassers. The Northern Natural Gas Co. on Section 3-32-2, came in with a gas flow of 12,500,000 feet from the Ellis sand at 1,576 feet.

The Dakota-Montana Oil & Gas Co. brought in a gasser on Section 35-34-1, that will make about 5,000,000 feet from a stray sand about the Ellis contact. The company has decided to mud off this flow for the present and drill the well to the Ellis to test that horizon.

On Section 30-35-1, the Remington Oil Co. has a small pumper in the Ellis sand at 1,545 feet but the company has decided to pass up this showing and drill into the lime for a chance stray sand below the Ellis.

The Cosmos Oil Co. drilled a producer on Section 20-35-1, that will make a 15-bbl. pumper and shot with 60 quarts. The company will drill deeper in hopes that a better pay will be found below the Ellis sand. The pay was struck at 1,509 feet.

On Section 29-35-2, the Fifty Six Petroleum Co. has an average producer in the Ellis sand at 1,543 feet and this well also had a showing of gas in the Sunburst sand.

Bears Den Dome

In the new strike on the Bears Den Dome in the Sweet Grass Hills, Section 17-36-6, the well has been swabbed the past week and will make better than a 50-bbl. producer as reported. It now appears the production is going to be close to 100 bbls. instead of 50.

On the Flowerlee structure about 20 miles northwest of Great Falls, the California Syndicate Oil Co.'s well found an artesian flow of water instead of the expected petroleum. The well is being abandoned.

The Texas Pacific test on the Pendroy Dome at 1,900 feet is repairing equipment. This is a wildcat about 5 miles west of the Pondera Field.

A new strike of oil is reported from the Flatwillow Dome, south of Winnett and the Cat Creek Field. Several wells have tested this structure without results, but the present wildcat by the Minnesota Flatwillow Oil Co. is reported showing for a producing well at 1,318 feet on Section 5-12-25. The oil is said to be 32 gravity and a paraffin base.

On the Bowdoin Dome in north central Montana, the Jones Oil Co., a Texas concern, has a wildcat flowing gas at 800 feet that appears to be commercial despite the shallow depth. The area is to be drilled further for this gas and the promoters of the system of gas pipe lines in Montana are interested.

The Montana-Dakota Power Co. has applied for a franchise to serve the town of Malta with gas and a line will be laid to serve both Malta and Glasgow.

The Fulton Petroleum Co. completed two new producers in the Pondera Field. Both are average producers and inside the defined boundaries.

PANHANDLE FIELDS

(Continued from Page 72)

in these figures, and next week's production report will no doubt tell quite a different story.

ESTIMATED DAILY AVERAGE PRODUCTION NORTH TEXAS
Week ending July 13

Panhandle District—	Prod.
Carson County	6,525
Hutchinson County	23,405
Gray County	53,995
Moore County	1,200
Potter County	10
Wheeler County	735
Total this week	85,870
Total last week	79,155
Increase	6,715
Wichita Falls District—	
Archer County	18,647
Taylor County	72
Clay County	663
Cooke County	6,256
Foard County	190
Jack County	3,262
Haskell County	144
Montague County	6,542
Throckmorton County	722
Wilbarger County	27,420
Young County	11,452
Wichita County	25,736
Total this week	101,106
Total last week	99,733
Increase	1,373
Ranger District—	
Brown County	7,550
Callahan County	4,180
Coleman County	6,320
Comanche County	1,195
Palo Pinto County	380
Eastland County	5,920
Shackelford County	11,175
Stephens County	6,180
Total this week	42,900
Total last week	42,345
Increase	555
Grand total this week	229,876
Grand total last week	221,233
Increase	8,643

WICHITA COMPLETIONS
Archer County

Brown Farm Oil Co.'s No. 5 Brown had an oil show at 1,581 feet, was drilled to a total depth of 1,594 feet and had an initial production of 25 bbls. Clark & Kruger's No. 1 Durham and others was dry and abandoned at 1,492 feet. Fain-McGaha Oil Corp.'s No. 1 Gwynne & Cranfill was dry and abandoned at 1,672 feet. Gohlke's No. 6 Wilson made 17 bbls. at 1,572½-80 feet. W. H. Hammond's No. 1 Hawley was dry and abandoned at 1,854 feet. Kemrow Production Co.'s No. 7 Campbell was dry and abandoned at 1,237 feet. Shappell Oil Co.'s No. 7 Lyles made 60 bbls. at 1,703-07 feet. Dr. C. W. Wallace's No. 5 fee made 80 bbls. at 1,784-89 feet. C. W. Boller's No. 1 Peters was dry and abandoned at 714 feet. J. H. Freeman's No. 5 Hennig was dry and abandoned at 1,450 feet. Humble Oil & Refining Co. and Fain-McGaha's No. 9 Logan-B had an initial production of 50 bbls. at 1,098-1,112 feet. E. B. Madden's No. 1 Anderson was dry and abandoned at 1,350 feet. Maxson and Prairie Oil & Gas Co.'s No. 1 Green had an initial production of 7 bbls. at 1,101½-1,111 feet. Petroleum Production Co. and others' No. 5 Kunkel had an initial production of 110 bbls. at 1,174-83 feet. Prairie Oil & Gas Co.'s No. 5 Richardson made 93 bbls. at 1,133-42 feet. Underwood Drilling Co. and Atlantic Oil Producing Co.'s No. 1 Andrews was dry and abandoned at 954 feet.

Cooke County

Benson Brothers' No. 1 Hovenkamp had an initial production of 27 bbls. at 754-60 feet. Ferguson and others' No. 1 English was dry and abandoned at 1,266 feet. Kewanee Oil & Gas Co.'s No. 2 Hair was dry and abandoned at 1,575 feet. The Texas Company's No. 1 Embry was dry and abandoned at 2,003 feet.

Montague County

Farlyn Oil Co.'s No. 1 Cunningham had an initial production of 30 bbls. at 922-30 feet.

Throckmorton County

Conway Brothers and Woodson Oil Co.'s No. 30 Overcash had an initial production of 35 bbls. of oil and 2 bbls. of water at 1,289-1,894 feet. Cranfill & Reynolds' No. 1 Walker was dry and abandoned at 650 feet.

Young County

Scott & Nance's No. 1 McBrayer made 4 bbls. at an oil show encountered at 2,080-95 feet and was dry and abandoned at 2,160 feet. Boller and others' No. 1 Hunt had an initial production of 15 bbls. at 1,016-19 feet. Bridwell & Clark's No. 3 Cullers was dry and abandoned at 620 feet. Kliner and others' No. 31 Langston made 10 bbls. at 539-54 feet. Parks and others' No. 1 Carpenter had an initial production of 80 bbls. the first 24 hours at 580-600 feet and 60 bbls. the second 24 hours. Perkins & Butter's No. 2 Whitt had an initial production of 15 bbls. at 1,018-24 feet. Southern and Gray's No. 1 Cullers was dry and abandoned at 701 feet. Stofford's No. 1 Brown made 60 bbls. at 554-57 feet.

Wichita County

Golding Cochran's No. 6 Waggoner Brothers had an initial production of 210 bbls. at 1,291-1,301 feet. Humble and Hines' No. 1 Hines-Burnett had an oil show at 1,965-71½ feet and was dry and abandoned at 1,990 feet. T. F. Hunter's No. 3 Waggoner Brothers-C had an initial production of 60 bbls. at 1,302-19 feet. Proctor's No. 1 Hamilton was dry and abandoned at 2,007 feet. Riner & Bailey's No. 7 Michie-A had an oil show at 1,774 feet, was drilled to a total depth of 1,786 feet and made 75 bbls. Reno & Goldsmith's No. 1 Parker was dry and abandoned at 1,932 feet. Stump and Empire's No. 1 Anderson & Patterson was dry and abandoned at 1,953 feet. E. J. Stump and others' No. 1 Chilson made 100 bbls. at 1,808-11 feet. United Production Co.'s No. 2 Allen-Kemp had an initial production of 43 bbls. at 1,749-50 feet.

Wilbarger County

Barkley & Meadows' No. 1 Waggoner was shot with 40 quarts at 2,419-35 feet and made 175 bbls. Their No. 9 Waggoner made 75 bbls. at 1,864-84 feet. Consolidated Oil Co.'s No. 5 Waggoner made 175 bbls. at 1,859-75 feet. Davis Hart Oil Co.'s No. 1 Waggoner was dry and abandoned at 2,025 feet. Empire Gas & Fuel Co.'s No. 11 Waggoner made 130 bbls. at 2,299-2,324 feet and was drilled to a total depth of 2,327 feet. Its No. 7 Waggoner made 160 bbls. at 2,329-49 feet. Fain-McGaha Oil Corp.'s No. 1 Waggoner made 125 bbls. at 2,298-2,312 feet and 2,312-20 feet. Its No. 13 Waggoner made 300 bbls. at 1,832-55 feet and was drilled to a total depth of 1,857 feet. King Royalty Co.'s No. 2 Waggoner made 175 bbls. at 1,861-80 feet. Knight's No. 7 Waggoner was dry and abandoned at 2,460 feet. Lewis Production Co.'s No. 2 Waggoner made 220 bbls. at 2,407-28 feet. Phillips Petroleum Co.'s No. 3 Waggoner made 55 bbls. at 2,276-2,300 feet.

Richfield Oil Co.'s No. 1 Waggoner was dry and abandoned at 2,705 feet.

(Continued on Page 150)

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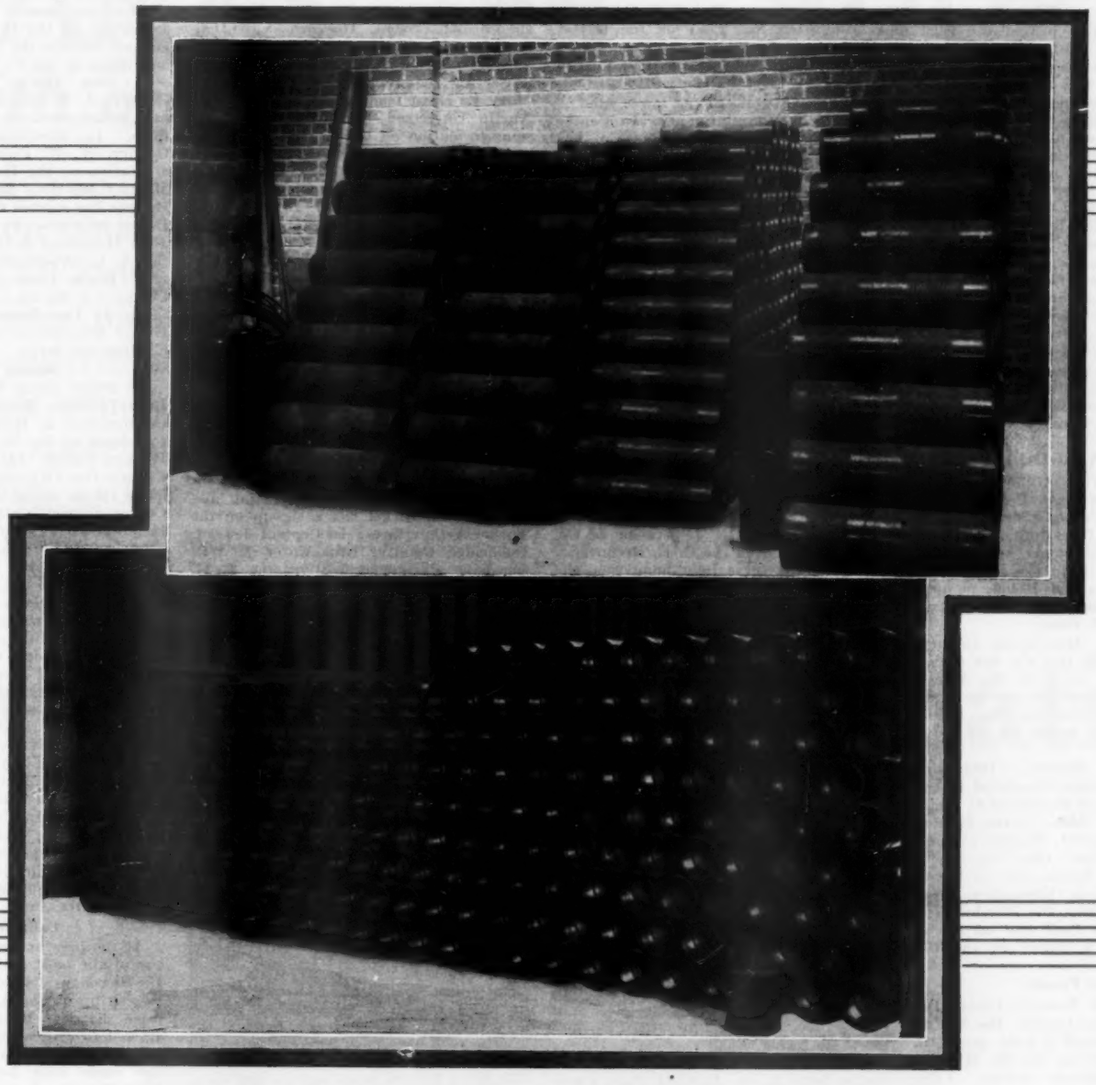

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Seeking Extensions in West Virginia

Tests Being Started in Advance of Production in Several Districts. Bradford Chief Feature in East

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., July 15.—The week of development work in the eastern fields proved the least fruitful of good producers for any like peperiod in a number of months, notwithstanding there were more than the usual number of completions in West Virginia and Southeast Ohio.

The revival of operations in the Bradford Field is the only feature in the East. The activity is said to resemble the old days when the fields were the stellar attraction. However, there is not the rush of operators to pull up stakes and join the procession that once flocked to Bradford from the "Lower Country." When the first flurry was over many of the operators came to the southwest to remain and others went to the Middle West or the Mid-Continent. Fortune smiled on some far beyond expectation.

WEST VIRGINIA

In DeKalb district, Gilmer County, West Virginia, the South Penn Oil Co. got a fair producer when it drilled No. 5 on the R. J. Ellis farm into the Maxon sand. It is estimated good for 50 bbls. In Lee district, Calhoun County, Kingsbury & Dollman have a 10-bbl. pumper in the Big Injun sand at a second test on the L. L. Lynch farm.

In Cass district, Monongalia County, the Carnegie Natural Gas Co. has a gasser in the Gantz sand on the Nancy Donley farm. In Clay district the same company's second test on the Grant Stephens farm is a gasser in the Fifth sand.

In McClellan district, Doddridge County, J. W. Johnson completed in the Gordon sand a test on the Selina C. Craig farm, good for 15 bbls. in the Gordon sand. In Troy district, Gilmer County, the Carnegie Natural Gas Co. has a gasser in the Big Injun sand in the J. W. Rymer farm. In Freeman's Creek district, Lewis County, the Pittsburgh & West Virginia Gas Co.'s test on the J. C. Teter farm is a gasser in the Big Injun sand.

Gilmer County

On Bull Fork of Tanner's Creek, DeKalb district, Gilmer County, the McCall Drilling Co. completed a light gasser in the Big Injun sand on the M. H. Frymier farm. In Meade district, Tyler County, Doctor Lowe and others completed a second test on the Charles E. Monroe farm. It is a gasser.

In Magnolia district, Wetzel County, the H.M.&E. Oil & Gas Co. is due in the sand on the B. B. Newman farm. In Liberty district, Marshall County, G. B. Patterson has drilled his test on the Mrs. Dolla Reese farm into the Gordon sand and showing a little oil. It will be tested.

In New Milton district, Doddridge County, the Hope Construction & Refining Co. have a very light pumper in the Gordon sand at No. 8 on the H. H. Douglas farm. In the same district, G. H. and J. E. Trainer have a 5-bbl. pumper in the Gordon sand at a second test on the Lewis Maxwell farm.

In Sheridan district, M. F. Crowley has a gasser in the Gordon sand at No. 3 on the W. H. Hase farm. In Center district C. B. Lewis' test on the Ralph Morris farm is a gasser. In Center district, Gilmer County, the McCall Drilling Co. drilled down to the Big Injun sand a second test on the L. R. Moore farm. It is dry and abandoned. In Church district, Wetzel County, the Carnegie Natural Gas Co. has completed No. 3 on the J. D. Bartrug farm. It is showing for a light oil producer. In Carroll district, Lincoln County, the United Fuel Gas Co. has completed No. 2,597 on the Daniel Bias farm. It is a gasser in the Berea grit.

Wetzel County

Drilling old wells to the lower sand is a feature in Wetzel County. In Center district the Myers Oil & Gas Co. has drilled down to the Gordon sand on the G. M. Myers farm. It is a light pumper. In Church district the Pure Oil Co. completed No. 3 on the W. C. Cole farm. It is a gasser in the Gordon sand. In Center district the Hope Natural Gas Co. has a 5-bbl. pumper in the Gordon sand at a second test on the Elmos Miller farm. In Center district, Burley & Orndoff have a 2-bbl. pumper in the Gordon sand on the Charles Pyles farm. In Liberty district, Marshall County, the Manufacturers Light & Heat Co. has a gasser in the Gordon sand at No. 3 on the C. and C. S. Fry farm. In Cameron district the same company is drilling at 3,000 feet on the R. S. Winters farm. The same company has started to drill on the Goshorn heirs' farm.

Light Pumper in Hancock County

On the Ohio River in Grant district, Hancock County, R. J. Braden & Co. completed No. 3 on the C. E. Brenneman farm, showing for a light pumper in the Berea grit. In Henry district, Clay County, the Virginian Gasoline & Oil Co. has completed in the Big Injun No. 6 on the Brown, Swan, Goshorn & O'Dell tract. It is estimated good for 10 bbls. In Lee district, F. F. McIntosh has a gasser in the Big Injun sand on the Mary E. Hays farm. In Center district, Austin Garretson has a gasser in the same formation on the J. M. Betts farm.

In Clay district, Monongalia County, the Carnegie Natural Gas Co. has a Fifth sand gasser at a second test on the Grant Stephens farm. In McClellan district, Doddridge County, J. W. Johnson has a 15-bbl. pumper on the Selina C. Craig farm. In Geary district, Roane County, the United Fuel Gas Co. has a gasser in the Big Injun sand at 592 feet on the L. B. Thompson farm. In the same district, the same company's No. 2,928 on the S. A. Hill farm is a gasser in the same formation.

In Advance of Production

In a number of districts in West Virginia, test work is starting in advance of production. In Lee district, Calhoun County, 2 miles in advance of production, the Hope Natural Gas Co. has a rig up on the K. M. Hunt farm. In Center district, W. H. Bickel has a rig up on the Turner-Arthur farm. In Central district, Doddridge County, Broadwater & Wilson have started to drill on the J. H. Betts farm. In Reedy district, Roane County, the Hope Construction & Refining Co. has part of the rig material at a location on the H. F. Enoch farm. In Harper district, the United Fuel Gas Co. is drilling on the C. Westfall farm.

In New Milton district, Doddridge County, J. E. Trainer is hauling tools to a location on the W. E. Sutton heirs' farm. In Sheridan district, Calhoun County, W. W. Daley & Co. have made a location on the Homer Jones farm. In Murphy district, Ritchie County, Park Bowser has started to drill on the W. R. Baker 50 acres. In Harrisville district, John Hammond & Co. are rigging up on the A. C. Woodford lot. In Geary district, Roane County, Richard Elkins & Co. have a rig up on the James Cottrel farm. In Lee district, Calhoun County, Everet Starcher is rigging up on the C. C. Starcher farm.

Roane County

On Sugar Camp Run of Reedy Creek, Reedy district, Roane County, the Hope Construction & Refining Co. has a rig completed on the W. H. Enoch farm. On Walnut Creek, Elk district, Kanawha County, the Virginian Gasoline & Oil Co. has a rig up on the J. F. Brown farm. In Center district, Calhoun County, George Hamilton has started to drill on the Frederick Ball farm. In Walker district, Wood County, the Penn Royal Oil Co. is rigging up on the Rebecca Montgomery farm. In Williams district, Hoskins & Rose are rigging up on the John Umstead farm. In Lee district, Calhoun County, the United Carbon Co. is due on the Laura Hall farm. In Birch district, Braxton County, the Philadelphia Gas Co. is drilling on the S. B. Cook farm.

In Clay district, Monongalia County, the Philadelphia Gas Co. has started to drill on the William Keck farm. In Ellsworth district, Tyler County, local parties have a rig completed on the A. J. Ferrell farm. In Center district, Wetzel County, Wade, Carney and others are building a rig on the F. A. Shuman farm. In Ten Mile district, Harrison County, John R. Dennison is drilling on the Allen Varner heirs' farm.

Calhoun County

At the present time Calhoun County is one of the most active in West Virginia. In Sherman district, W. H. Bickel is rigging up on the A. Shock farm. In the same district, McIntosh & Miller have started to drill on the E. E. Miles farm. In the same district, Godfrey L. Cabot has made four locations. The United Fuel Gas Co. has also made a location on the Amanda Elliott farm. In Lee district, F. F. McIntosh & Co. are fishing on the D. W. Price farm and made a location on the George Griffin farm.

In New Milton district, Doddridge County, J. E. Trainer is moving in tools to a location on the W. E. Sutton heirs' farm. In Sheridan district, Calhoun County, W. W. Daley & Co. have made a location on the Homer Jones farm. In Murphy district, Ritchie County, Park Bowser has started to drill on the W. R. Baker 50 acres. In Harrisville, John Hammond and others are rigging up on the A. C. Woodford lot. In Geary district, Roane County, Richard Elkins & Co. have a rig up on the James Cottrel farm. In Lee district, Calhoun County, Everet Starcher is rigging up on the C. C. Starcher farm.

SOUTHEAST OHIO

In Lot 9, Hardy Township, Holmes County, the East Ohio Gas Co. has completed a second test on the Christian Schlab farm. It produced 25 bbls. the first 24 hours after shot in the Clinton sand.

In the SW of Section 19, Wheeling

(Continued on Page 108)

STANDARD OF KENTUCKY ENTERS WESTERN KENTUCKY DISTRICT

By Whit
Staff Correspondent, Kentucky-Tennessee

OWENSBORO, Ky., July 15.—With the Bartlett Pool in Ohio County failing to report any new completions for several days, the new production is very light compared with previous week's but the next week or so should show a large increase in new production as a number of wells within defined limits of the pool are due for completion, the territory being very shallow drilling.

A new interest has taken on development work in the Tri-County Field of western Kentucky. The Standard Oil Co. of Kentucky finally ventured into the field, when the company's drilling crew began spudding on the Clarence Patton lease in the Bartlett Pool, where some of the largest producers in the field have come in recently. The Patton lease is an offset to the Kirk lease of 141 acres, which belongs to the Ohio Oil Co., where a well flowed around 500 bbls. initial and continued around that production for a few days, and is still a heavy producer after several weeks of production. With luck the Standard will push development of other good leases in this territory. Julius Bellma, son of the late J. Hunter Bell, one of the vice presidents of the Standard of Kentucky, located at Louisville, who has been with the company for 30 years and is also purchasing agent for the corporation, owns 535 acres adjoining the lease of the First National Bank south of the Hartford Road, and near the Burton Pool, in Daviess County. There are several wells already completed on the First National Bank land.

Other large developing concerns are entering the various counties in western Kentucky and many new strings of tools are to be transported out of Owensboro for the different locations, which are all of a wildcat nature. One oil scout stated it would not be surprising to see many new pools opened before the snow flies. The crude in western Kentucky is known to be a good grade and refiners are anxious to secure it.

Week's Work

Total runs made from wells served by the Illinois Pipe Line Co. in western Kentucky during June amounted to 182,330.58 bbls. The Producers Pipe Line Co. handles considerable oil monthly from the Tri-County Field, comprising Ohio, Daviess and Hancock Counties, while some oil is shipped by rail from the Dundee area of Ohio County, the oil going to Louisiana refineries.

A summary of the week's work in the Kentucky Field shows 25 completions, 14 producers with an initial production of 238 bbls., 11 dry holes and no gas wells.

	Comp.	Oil wells	Prod.	Dry
Daviess	14	8	208	6
Ohio	10	5	74	5
Allen	1	1	6	0
Total	25	14	288	11

Daviess County Wells

The best of the late completions in Daviess County is the Petroleum Co.'s No. 16 on the E. L. Burns farm, in the Utica Pool, which showed an initial of 55 bbls.

Eastern Gulf Oil Co.'s No. 8 on the M. C. Ruby 125 acres, in the Red Hill Field, produced an initial of 40 bbls., and No. 9 on the W. A. Murray, same field, produced an initial of 20 bbls.

Ohio Oil Co. drilled a wildcat 3½ miles west of Utica on the G. R. Westerfield farm, finding a dry hole.

Goldburg, Young and others' No. 4 Lindsay Purcell, in the Red Hill Field, pumped 25 bbls. initial, with Nos. 5 and 6, same farm, drilling. Wood Oil Co., Inc.'s Nos. 4 and 5 on the R. F. Sands, in the Red Hill Field, produced 8 and 5 bbls. respectively the first 24 hours.

L. C. Young found a dry hole in a test on the J. Q. May, 4 miles east of

(Continued on Page 121)

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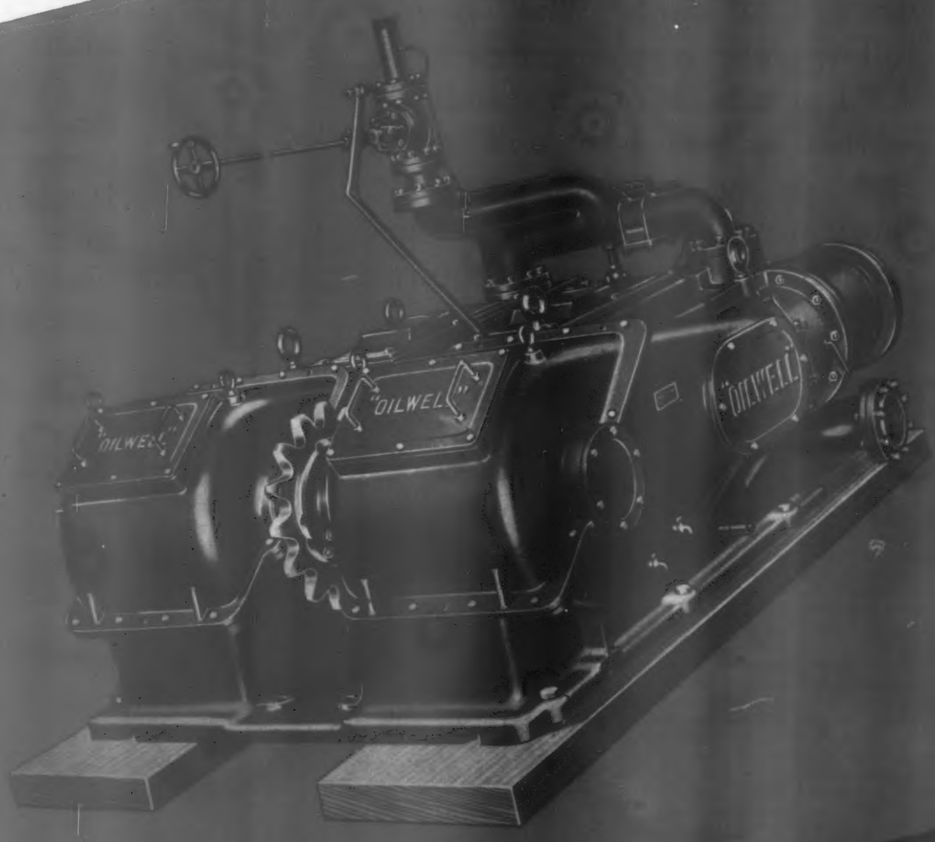

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BRANCH STORES
IN ALL OIL FIELDS

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

DO THE JARS WORK?

I am working on a well here in the Kettleman Hills and an argument has grown up in the several crews on the subject of cable tools. The question is, "Do jars run above, in drilling with cable tools, work?" That is, is there a break in the tension of the two reins, as the tools hit down?

One side says there is not; that the spring in the line always keeps the upper and lower half hanging tight and that there is never a working of the jars as long as the tools are not mudded or stuck.

The other side says that regardless of the tension and spring in the wire line, there is a break in the jars as the tools hit down. The break may be minute, just a quarter or half an inch, but there is a break.

I am inclined to think there is a slight break. If you can settle this it may save bloodshed for the question is pretty hot and touchy.—L. A.

Opinion in the Mid-Continent Field seems to be that if the tools are run with the proper motion the jars will not work in the hole, no matter how deep they may be drilling.

When the tools are run back into the hole after a pull out, it will be necessary for the driller to pick up his motion, and while doing this it is possible that the jars will work some, but just as soon as the proper motion is gained the whole string of tools should move in unison, that is the weight of the stem and bit below the jars will keep the upper and lower portions of the jars pulled out to their full strength.

Wear will be observed in jars and this is caused by this loose motion while the driller is adjusting stroke, but if he knows his business this movement in the jars will cease quickly and even when drilling below 600 feet and the stroke of the walking beam is upward while the tools are moving downward, the weight of the string below the jars will keep them pulled out to full length.

Mid-Continent practice places the jars between the rope socket and the stem and in this position the best drilling results will be obtained.

So the answer to the question seems to be left with the driller. If he has proper motion he will not have movement in the jars. If the motion is not right, there will be movement in the jars and his footage will be cut down correspondingly.

CONCERNING CORE DRILLING

Tell me please in what oil field first use of the core drill was made. How long has it been in use? I would like to have you tell me also something about the uses which the core drill has been put to in the oil industry.—E. E. L.

The following information answering your question was obtained from the Elliott Core Drilling Co., Los Angeles, Calif.:

The double-barrel rotary core drill was introduced commercially in the oil industry in the opening of the Huntington Beach Field in California the latter part of 1921 and early days of 1922 when wells below a depth of 4,000 feet were the exception. Completion of such wells to a productive basis was considered a problem, particularly in the use of rotary tools in drilling through the productive horizons.

The double-barrel core drill was used at Huntington Beach to locate definitely the thin shale body which separated the oil measures from overlying water sands, it being necessary to cement casing in this thin shale body to procure a satisfactory water shutoff.

The use of this tool has grown in eight years until it is now used throughout the world and it has been the means of fostering and maintaining several other important branches of the petroleum industry.

The micropaleontologist, who was practically unknown to the petroleum industry in 1922, now has a definite place in it owing almost entirely to the use of the core drill. All major companies now maintain departments specializing in this work and the smaller companies have their cores examined and analyzed by consulting paleontologists.

The information obtained from the core drill has made correlation of various strata definite and has enabled geologists to place the various productive horizons as to geologic age and has greatly aided all exploration work by giving a greater knowledge of the relative positions of the formations penetrated.

As regards repressuring work with gas, air and water, the core drill has provided information upon which this now important operation is based. The core drill has called attention definitely to the declination of bore holes from the vertical mainly by locating varying strata definitely as to depth in any one hole. The core drill also has brought into use the sand tester, used to test the production of the sand which has been cored and which has given the appearance of providing production either of oil or gas.

By many companies the core drill is used to core all cement jobs and results obtained allow a careful study of the setting of cement in various fields under different conditions.

It is a common practice among many oil companies to core the entire productive horizon and to base the amount of perforated pipe used on information obtained from cores. In this way blank pipe is used opposite shale bodies or other unproductive lenses.

Continuous coring is now employed by many companies and instances of cores 40 and 50 feet in length being cut are not an uncommon occurrence in many areas.

The use of the various diamond substitutes in dressing cutting edges and the perfecting of core drills with roller heads suitable for coring harder formations has brought this tool into more general use and at present it is one tool used extensively on practically all wells throughout the world.

There are undoubtedly many other cases where the core drill has assisted in solving drilling problems and as time goes on the tool will undoubtedly be further improved and its use will be increased.

SALT PRESENTS A PROBLEM

We are having a great deal of trouble pumping wells that carry a large percentage of salt water because the salt precipitates and forms a mass that will plug the tubing and casing and to remove it we have been using fresh water and tools. Can you tell us a chemical that might break up the salt quickly and not injure the pipe in the hole?—T. L. C.

There is no better solvent for salt than water and if there were some chemical that could be used to break up the salt crystals in the well it is more than probable that it would be necessary to introduce it into the well with water. Therefore, to use water to carry some chemical into the hole would only be adding to your expense and complicating matters, so it is suggested that you continue to add clear fresh water to remove this encrusted salt.

However, perhaps you could find the reason why this salt, and perhaps other solids, precipitate in the tubing and casing, for if there has been sufficient water in the sand to dissolve this mass and carry it to the open hole there must have been some decided change in conditions there to make it drop out of solution.

It might pay you to have some of this material analyzed by a chemist for it is possible that leaky casing is permitting two or more waters to mix in the well and by such mixing they are causing a chemical reaction that is precipitating this mass on the pipe at the bottom of the well. If the precipitation is not at the bottom of the well it may be that there is some decided change in temperature at the point of deposition that might be remedied.

The main thing of interest is: Why does this material drop out of water that has carried it part way out of the sand toward the surface? If this condition can be discovered it should not take long to remedy it and thus prevent encrustation and remove the trouble you are experiencing. If you get the solids analyzed this department would be glad to hear from you further.

WHY WAS IT CALLED THAT?

MUD-HOG

This name is applied to a type of steam pump used in rotary drilling operations and it was given because the pump is just that, a "mud-hog." It forces the rotary mud into the hole and in so doing makes a noise much like a big hog wallowing in a mud hole.

In later development of rotary drilling the type of power has been changed from steam to electric or internal combustion type motor in some cases, but the pump is still a "mud-hog."

PIPE LINE PRACTICE

I am connected with a pipe line company. Is there a handbook on pipe line practices or a textbook giving information that usually has to be learned in the field? If there is such a book please send me the name.—U. W.

There seems to be need for such a book as you describe, but it remains for the future to produce it. "Petroleum Production Methods," by John R. Suman, in charge of production for the Humble Oil & Refining Co., Houston, Tex., contains a section devoted to pipe line practice which should be of value to you. "Handbook of the Petroleum Industry," by Dr. David T. Day, is a two-volume work which also contains chapters which you would find of help. It is published by John Wiley & Sons, Inc., New York. You will find of special interest the pipe line numbers of The Oil and Gas Journal, published October 7, 1926, and August 30, 1928.

PITTING OF POLISHED ROD

I have been having some trouble with the polished rods on my wells pitting and becoming rough so that they cut the stuffing boxes and I am wondering if you can suggest any good remedy for this trouble?—A. L. H.

Your trouble might be reduced somewhat by the old rod liner or "yellow jacket" once so commonly used in the eastern fields under similar conditions.

This device consists of a hollow brass tube, which gives it its name, fitted over the polished rod. It acts as a sleeve and protects the rod from direct wear on the stuffing box on top of the tubing.

There are certain objections to the use of this type of liner in that the fit between it and the polished rod is not close and it is possible to get some movement there which is not desirable.

However, the "yellow jackets" can be procured at the oil well supply stores in desired lengths and for the different size polished rods and will give some satisfaction in removing the trouble you mention in that they at least will present a smooth surface to the stuffing box instead of the roughened one the polished rod now has.

SHOULD CONSULT A LAWYER

Being a nonresident of Texas and a landowner of that State I am anxious to know what steps to take in regard to leasing my land for oil prospecting. The land is located in Hartley County, Panhandle district, near the town of Dalhart. Having had several inquiries in regard to the leasing of my land, I hesitate to sign on the dotted line with any of them, as I am not familiar with the method and the royalty basis usually offered by the different companies. Will you please advise me where I can obtain the desired information and be assured that it is of a reliable nature?—T. A.

As you probably realize, this is not a field problem, for solution by an oil man, but a legal question, calling for the advice of a lawyer. Space is given to it on this page for the reason that many similar communications come to this department, and the answer given here may serve as a guide to others in similar circumstances. You are advised to consult your own lawyer first. In all probability he will be able to give you the information you need. If he cannot, then you may be quite sure that legal directories in his possession, or personal acquaintanceships perhaps, will enable him to name the right person for you to consult.

ON most properties today you will find an overwhelming majority of equipment Hyattized. Attested endurance economies and freedom from bearing ills have won for Hyatt universal preference among oil well equipment builders.

That is why Gardner-Denver have standardized exclusively on Hyatt bearings for all their power pumps. Sturdy Hyatts withstand the day in, day out grind of pump service with uninterrupted regularity and precision.

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Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

RECLAIMED LUBRICATING OIL FOR FUEL

Could you give me any information regarding the burning of oil drained from crankcases? Outside of different reclaiming processes this oil is being treated and resold for good lubricant, is there any other use for it and what? Does it hold up as a good lubricant? I am interested to know whether it would be any good in boiler heating? What type burners would you recommend for its use along this line?—G. R. A.

Much of the oil that is drained from crankcases contains a large proportion of gasoline and lubricating oil which may be treated, by processes similar to those used in petroleum refineries, so that valuable products may be recovered. Under ordinary circumstances the greater part of this material is lubricating oil, but sometimes appreciable quantities of gasoline, naphtha and kerosene may be found.

The common practice is to treat the drainings so that the final product will be a commercial lubricating oil and if the reclaiming process is complete, there is no reason to doubt that a lubricating oil of some value will be obtained. The difficulty that is so often reported is that such a reclaiming plant is seldom profitable enough to permit its operation as a commercial enterprise. Many manufacturing plants have some method for recovering drippirgs and drainings from the machinery. Some of the bus lines and companies operating a large number of automobiles and trucks find it profitable to reclaim the used oil.

It would not be necessary to have the reclaiming process so thorough when the product is to be burned, as for a finished lubricating oil. All that would be essential would include the removal of the more volatile products, such as gasoline and naphtha, and any solid material. An important consideration is the price of fuel oil and the quantity required when used as boiler fuel. If you can reclaim oil from crankcase drainings at a lower cost than you would have to pay for ordinary fuel oil, there is no reason why such a product could not be used as a fuel.

The burners that are suitable for use with fuel oil could be used for burning reclaimed oil.

SURFACE TENSION AND LUBRICATING VALUE

I would appreciate it if you will explain the meaning of surface tension as applied to the lubricating quality of lubricating oils. Does viscosity vary with the surface tension and has surface tension anything to do with service value or oiliness of lubricating oils?—H. W. L.

There are numerous references to the literature about the surface tension of lubricating oils to be found in Motor Fuels, by Leslie. The following quotation from the article in the Journal of Ind. Eng. Chem., Vol. 7, page 578, (1915) by Rittman and Dean, is on page 603.

Surface tension is a direct result of unbalanced intermolecular forces at the boundary between the liquid and gas phase, and is manifested by the apparent formation of an elastic skin. The familiar experiment of floating a greasy steel needle on water is the simplest and most impressive way of demonstrating the existence of a tension along the surface of a liquid. Two common resulting effects are the tendency of all liquids to form spherical drops whenever possible and the rise in tubes of all liquids which are able to wet the material of which the tube is composed.

Prof. W. E. Gibbs, in a paper before the Society of Chemical Industry, February 8, 1929, explained surface tension as follows:

A molecule in the interior of a liquid is attracted on all sides by the neighboring molecules. A molecule in the surface of the liquid is attracted by molecules which are adjacent to it in the surface or lie beneath it in the liquid. Vapor molecules, except when they collide with it, are beyond its sphere of attraction. The molecule is, therefore, acted upon by an unbalanced set of forces the result of which is a force acting normal to the surface of the liquid or tending to draw the molecule into the interior. The outward and visible sign of this inward pull is the behavior of the surface in offering a definite resistance to any force which tends to extend it. The magnitude of this contractile force, or surface tension, is peculiar to a given liquid.

Since the molecules themselves are considered to be inelastic, the surface of a liquid can only be extended by bringing more molecules into it from the immediate interior. To do this it will be necessary to supply them with sufficient energy to enable them to overcome the inwardly directed result of the intermolecular attractional forces.

It is obvious, that the potential energy of the surface tends always to reduce the area of the surface to a minimum. It draws a small volume of liquid into a spherical drop, it contracts a thread of liquid into a series of spherical droplets, it separates an intimate mixture of two immiscible liquids into two separate phases separated by the smallest possible interface.

Similar conditions are obtained when a liquid comes into contact with a solid surface. If the force of adhesion is negligible the liquid does not wet the surface, but retains its surface tension unimpaired and draws itself into a spherical droplet which is more or less flattened by the force of gravity. When the liquid molecules and those of the solid surface attract one another, wetting occurs and the liquid spreads to an extent which is determined by the spreading co-efficient and which is indicated by the contact angle which the surface of the liquid finally makes with the liquid to solid interface.

When two liquids rest upon a solid surface in relation to which they have different spreading co-efficients—or wetting power—one liquid is pulled towards the solid surface with more force than the other. They will spread until their advancing edges meet to form a liquid to liquid interface which will be inclined to the solid surface at an angle the magnitude and sign of which will be determined by the balance between three interfacial tensions, liquid A to liquid B, liquid A to solid and liquid B to solid. The liquid to liquid interface will be inclined in the direction of the liquid which possesses the smaller spreading power. Provided that the system is sufficiently mobile, i.e., if the viscosity of the liquids be not too high and if they be stirred or agitated suitably, the liquid with the higher wetting power will ultimately displace the other. The solid surface is said to be preferentially wetted by the liquid with the greater wetting power.

Francis and Bennett reported the surface tensions, with other data, of several lubricating oils in the Journal Ind. Eng. Chem., Vol. 14, p. 627, 1922. Their experiments indicated that the surface tension increased with increasing viscosities and as the gravity became heavier.

We have ample reason to believe that the surface tension of lubricating oils has some influence on the degree of adhesion and general stability of the protective film when it is in contact with metal. Metallic surfaces are wet by oils because the surface tensions are lower than those of metals. It is known that two lubricating oils apparently identical, when classified by the common tests, very often do not behave alike; oils of the same viscosity may not flow in the same way between two surfaces, do not spread the same, or do not wet the surface in the same way. Just why this is so we do not know and it may be that surface tension will be shown to be extremely important in the matter of oiliness and service.

CRACKED GASOLINE PRODUCTION

When did the production of cracked gasoline become an important consideration in the petroleum industry? What part of the crude oil is used for this purpose? The essential facts about this development will be appreciated.—M. R.

The manufacture of cracked gasoline has had a marked influence on the quantity of gasoline required for the ever-increasing demands for gasoline since 1918. This subject has been treated in a publication of the American Petroleum Institute, Petroleum Facts and Figures, from which the material following is adapted.

The cracking process began to be commercially important during the World War because of the demand for gasoline for war purposes and the threat of a shortage of crude oil at that time. During the year 1918 there were 8,500,000 bbls. of cracked gasoline produced by the refineries of the United States; this increased to 93,736,000 bbls. in 1926 and it is estimated that the quantity of gasoline from this source will be over 135,000,000 bbls. for the year 1929. In 1926 cracked gasoline supplied 31.3 per cent of the total quantity of gasoline manufactured in the United States. The proportion of cracked gasoline to the total supply in 1923 was only 19 per cent and in 1917 it was only 10 per cent.

Without the supply of gasoline by cracking, the use of automobiles could probably not have expanded to its present proportion for lack of fuel. The average yearly consumption over the eight-year period, from 1918 to 1926, is estimated at 458 gallons. On this basis cracked gasoline supplied the fuel for 8,600,000 motor vehicles in 1926; that is, for as many cars as the total number in operation in this country in 1920.

Commercial natural gasoline production dates from 1911, but the quantity extracted from natural gas was equivalent to only 1 per cent of all gasoline made in 1918. With this exception, before cracked gasoline was made, gasoline was derived solely from crude oil by what are known as topping or skimming operation; also called straightrun. The major products separated by this kind of refining are gasoline, kerosene, gas oil, lubricating oil, and fuel oil. The products used for cracking are gas oil, unfinished lubricating oil, and fuel oil. On straightrun operation, crude oil yields on the average about 24 per cent gasoline, but with the addition of cracking stills some refiners are now obtaining a total yield of 60 per cent, and even 80 per cent does not seem an impossible goal.

GRAVITY AND GASOLINE CONTENT CRUDE OIL

It would be of considerable importance to us to know the range of gravity for the crude oils as produced in the different districts and, if possible, the yield of gasoline from these oils by the ordinary topping practice.—S. T. E.

According to a recent announcement by the United States Bureau of Mines, the average gravity of the petroleum produced in the United States was 32.2 A. P.I. This is based on a survey which included the examination of 78 samples collected in the representative districts of the country. The reason for the low gravity may be found in the fact that the California production represented about 25 per cent of the total and tested only 24.1 A.P.I. as an average gravity. The crude found in Arkansas tested 21.6, which was the lowest average for all states.

The highest average gravity for any state was 48.5 A.P.I. for New Mexico. The crude from the Rattlesnake Field in San Juan County was reported at 65 A. P.I., while tests have been made of this oil showing a gravity of 75 A.P.I. Other states which show high average gravities are Michigan, 44.0; New York, 43.5; West Virginia, 43.3; and Pennsylvania, 42.0 A.P.I.

The heaviest, or lowest gravity oil appeared to be that found at Casmalia, Santa Barbara County, California. This oil tested 6.8 A.P.I., equivalent to 1.023 specific gravity; or heavier than water. The crude produced in Texas varied between slightly below 20 to over 40. The state average was 32.4 A.P.I.

The 78 samples examined represented 29.4 per cent of the total production. Calculating the weighted average, on the basis of production, the average gravity of the samples becomes 30.4 A.P.I. If the percentage of gasoline in each sample is calculated in the same manner, the weighted gasoline content was 23.4 per cent. It appears safe to assume that this percentage yield of gasoline is very close to the actual yield that may be obtained by topping; because the yield of gasoline in 1927 by straightrun operation was 24 per cent of the total crude run. That is without including any natural gasoline that may have been used for blending with the refinery product.

Additional information about the crude oils of the United States may be obtained from Bureau of Mines Circular No. 6,114.

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EQUIPMENT AND SUPPLIES

GREASE COMPANY TAKES A NEW CORPORATE NAME

The Battenfeld Grease & Oil Co. (Louisiana), Inc., announces the change in its corporate name to International Lubricant Corp. The interests formerly held by J. R. Battenfeld, A. J. Daniel, B. B. Boulware, and the Battenfeld Grease & Oil Co., all of Kansas City, Mo., have been acquired by southern men already interested in the business.

The new owners have decided to construct a modern grease plant in New Orleans for the manufacture of high quality automotive and industrial lubricants.

The officers of the International Lubricant Corp. are W. H. Saunders, Jr., president and treasurer; E. E. Linthicum, vice president, and H. M. Fraser, vice president and secretary. Office address will remain in the Canal Bank Building, New Orleans, La.

UNITED TRACTOR ELECTION

Milton W. Anderson, Chicago, was re-elected president of the United Tractor & Equipment Corp., comprising 40 makers and distributors of tractors, farm implements and industrial equipment, at the annual directors' meeting in Milwaukee. W. B. May, president of W. B. May, Inc., Buffalo, N. Y., was elected vice president; E. R. Wehr, vice president of the Wehr Co., Milwaukee, Wis., was elected secretary-treasurer, and H. T. Enns, Jr., Chicago, assistant secretary-treasurer. Directors were elected at the stockholders' annual meeting in Chicago as follows: H. C. Merritt, Allis-Chalmers, Walter H. Stiemke, Trackson Co., and E. R. Wehr, all of Milwaukee; Arthur S. Hughes, Hughes-Keenan Co., Mansfield, Ohio; Dunbar Abston Dealers' Equipment Co., Memphis, Tenn.; A. W. Logan, Motor Power Equipment Co., St. Paul, Minn.; C. V. Ruble, Universal Equipment Co., Kansas City, Mo.; W. B. May, W. B. May, Inc., Buffalo, N. Y., and Milton W. Anderson.

BUSINESS NOTES

The Griscom-Russell Co. has established a new sales office in the Lewis Building, Portland, Ore., to handle its Reilly and Bentube evaporators, U-fin generator air-coolers, Multiwhirl oil-coolers, bleeder heaters, expansion joints, condensers, coolers and heat exchangers.

Boyd McKinley, who was with the organization for two years, has rejoined the sales staff of the MacClatchie Manufacturing Co., Compton, Calif. He is assigned to Santa Barbara and will also be associated with L. O. Myers in supervising underreaming in the Bakersfield district.

D. T. MacLeod, president of the Perfex Corp., Milwaukee, Wis., manufacturer of heavy duty radiators, announces the promotion of John W. Tambert, for five years in charge of the cost and manufacturing departments, to the post of secretary and treasurer, taking the place of C. G. Phelps, who resigned.

J. M. McNeal, direct representative in Europe of the Landis Machine Co., Waynesboro, Pa., manufacturer of threading machinery, has sailed for England, after spending a month at the home office in Waynesboro.

N. R. Sage, export manager of the Russell Manufacturing Co., Middletown, Conn., has returned from a two months' trip covering some of the major Rusco outlets in Europe. He traveled in France, Spain, Portugal, Italy, Switzerland, Germany, Denmark, Netherlands, Belgium and England.

YOUNG NOW WITH HUBBARD

Harry W. Young, who has had thorough field training in the drilling of oil wells, has joined the Hubbard Drilling Co., Tulsa, as assistant manager. Mr. Young was born in Butler, Pa., and was dressing tools at the age of 16 when oil excitement was high in that district. When drilling the Butler 60-foot sand it was necessary to dress a bit after every run. Going to Chanute, Kans., in 1904 as a driller, Mr. Young soon became a drilling contractor. For six years prior to joining the Hubbard organization he was with the Bridgeport Machine Co. in Tulsa as office manager.

Harry W. Young

PISTON HAS NEW FEATURES

A new automatic slush-pump piston is announced by the National Tool & Metals, Inc., of Torrance, Calif. The new piston, nonpulsating in principle of operation, has as its main features automatic expansion and equalized liner pressure. According to the manufacturers, the automatic expansion and equalized liner pressure of the piston is made possible by a high-grade steel spring exerting pressure against four tapered steel slips, which, in turn cause the rubber of the piston to expand and hold an even tension against the liner and reduce pump liner wear to a minimum. An added feature of the Nelson piston is the metal follower plates and heads which act as protectors against which the piston rubber can seat. With this arrangement the piston rubber has little chance of losing its pressure on account of overlapping.

CHECKS OIL GOING TO ENGINE

The McCord independent liquid sight feed provides a method of checking the amount of oil going to the engine or compressor cylinders. Oil that is delivered by the mechanical lubricator passes up through this liquid sight feeder, under pressure, on its way to the cylinder. There are no opportunities for undetected leakage after the oil has passed through this sight feed, which acts as a telltale. On the delivery stroke of the mechanical lubricator, the check valve opens allowing oil to pass up through delivery nozzle into the liquid chamber of the sight feed body and on into the cylinder.

BIT UNDERREAMS AND DRILLS AT ONE TIME

The Lucey Manufacturing Corp., Chattanooga, Tenn., has taken over the manufacture of the Brunt combined fishtail and underreaming bit. This is in reality a fishtail bit with collapsible and interchangeable cutters so designed that it will drill and underream the hole in one operation, eliminating the necessity of first having to drill the hole and then pull out the drill pipe to run back in with the underreamer.

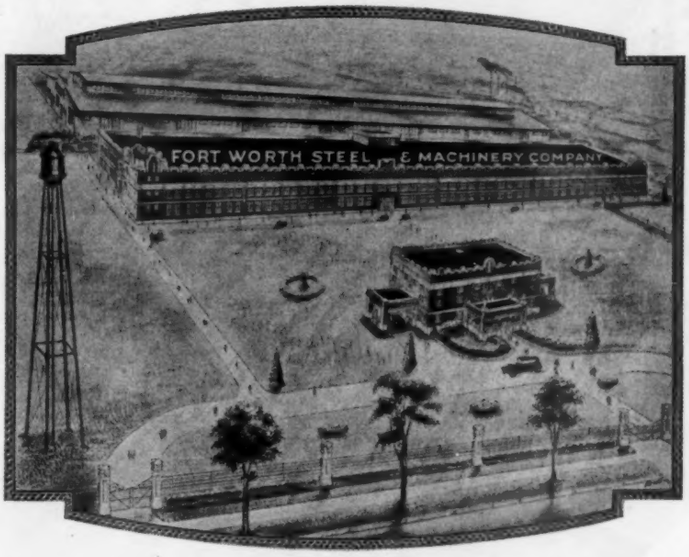
This underreaming bit is said to make more footage per run owing to the fact that the cutters can be dressed with a 100 per cent cutting edge and that the arrangement of the water course holes prevents balling up of the bit.

When fully expanded the cutters overlap far enough to prevent their being twisted out of shape. Neither rock nor other substance can lodge between the cutters and jam them. The cutters are embedded firmly into a shoulder and spudding can be done in the ordinary way.

Should casing hang up while running in the hole, there would be no need to pull out the string and clear the hole of the obstruction, as this bit can be run in and the obstruction drilled up, the casing hanging in the hole the whole time.

The Brunt combined fishtail and underreaming bit was designed by a man who has had years of experience in drilling operations in various oil fields of the world. Bulletin No. 126-A, describing the bit, may be obtained from any of the offices of the Lucey Products Corp. or any distributor of Lucey equipment.

FORT WORTH COMPANY DOES MUCH OIL INDUSTRY WORK



The Fort Worth Steel & Machinery Co., Fort Worth, Tex., was organized in 1923 for the principal purpose of manufacturing cotton seed oil machinery. The heavy shop machinery necessary for the production of this equipment, however, ranked this company among the largest three machine shops southwest of St. Louis, and brought it so much outside machine shop work that it has come to be especially efficient in this type of engineering.

The plant is equipped with 36-foot engine lathes, 30-foot planers, radial drill presses and milling machines, as well as minute precision instruments.

During recent years this company has done much machine work for refineries around Fort Worth and throughout West Texas, as well as other branches of the oil industry. It has become expert in the returning of Kelly drill stems and performs other difficult tasks to lengthen the life and reduce maintenance costs of oil field equipment.

GENERAL ELECTRIC HAS NEW INSULATING PAINT

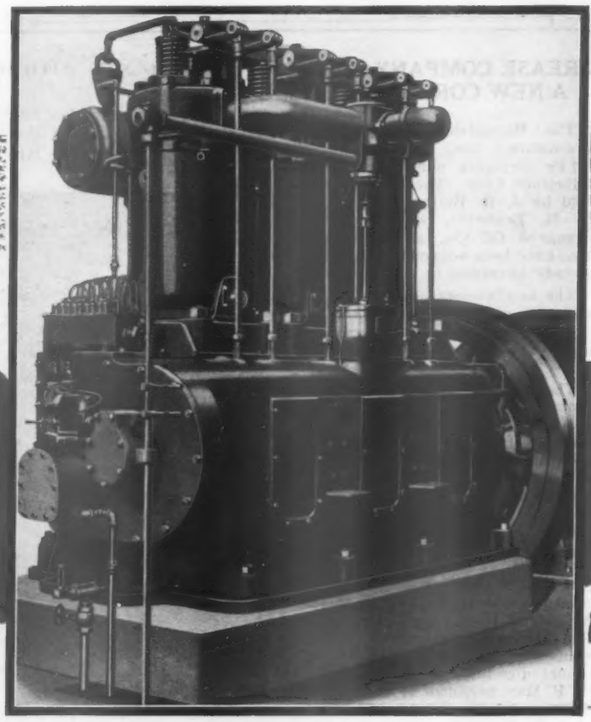
For sealing joints in gas mains, for painting structural iron, motors, oil tanks, mine machinery and similar equipment requiring sealing and insulating paints, the General Electric Co., Schenectady, N. Y., is offering a series of lacquers in colors, for use where an oil resistant, highly protective, durable and flexible insulating coating is demanded. The base of the new lacquers is an alkyd resin produced from phthalic anhydride and glycerin developed in the research laboratories of the General Electric Co. and marketed by that company under the trade name Glyptal.

These paints are said to resist acids, mineral oils, weather and alkalies; to adhere tenaciously to any surface, including galvanized iron and aluminum and protect against rust.

The lacquers are available in five colors, red, blue, brown, green and aluminum. They may be applied by brushing, spraying or dipping and dry dust free in about 30 minutes, and in approximately 10 hours to a hard, smooth finish which is not brittle and which is easily cleaned. No priming or sizing is necessary.

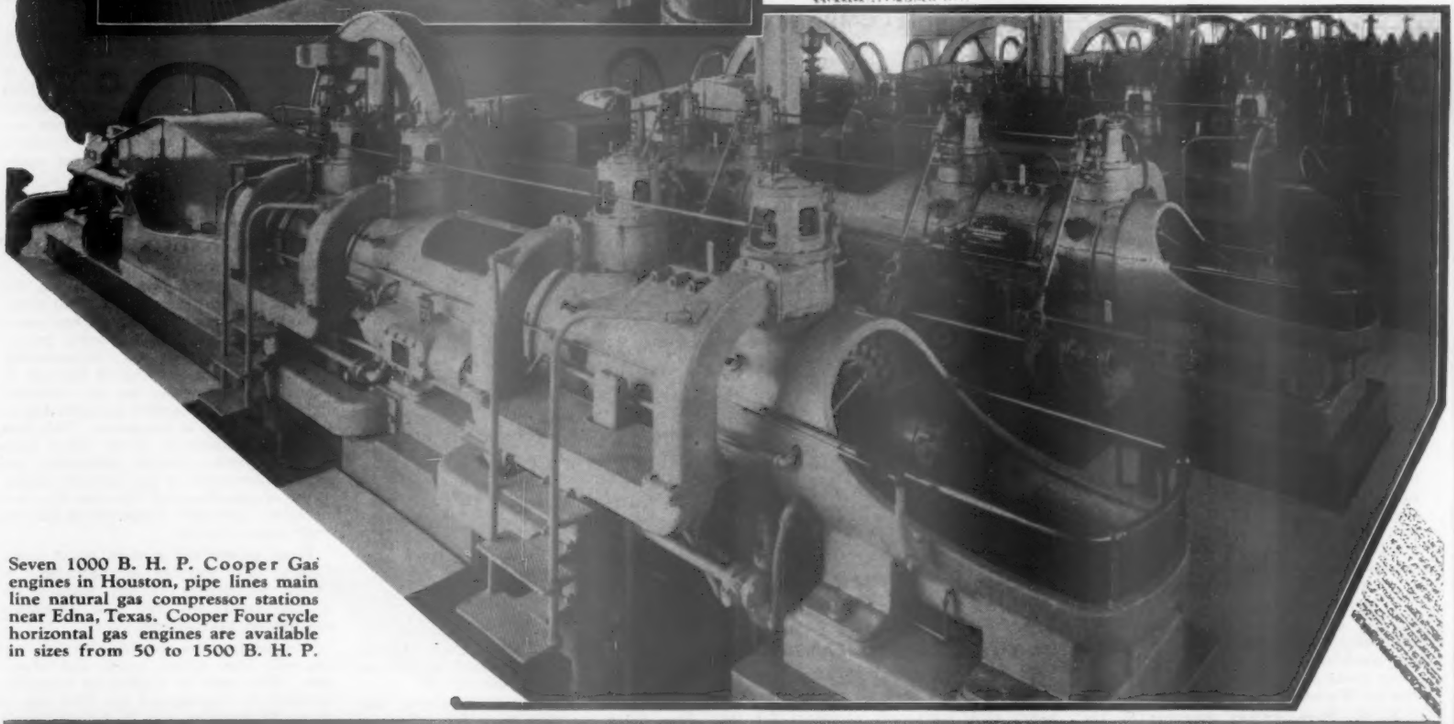
Central stations, oil refineries, mines, gas and mechanical plants are among places where applications of the new lacquers are reported to be advantageous.

A TRIPLE



Eighteen Bessemer Type-10 two cycle gas engines in one of Carter Oil Company's gasoline plants in the Seminole field. Bessemer two and four cycle engines are built for every oil and gas field service in sizes from 12 ½ to 200 H. P.

A Hope 200 H. P. three cylinder vertical gas engine driving an alternating current generator in oil field service. Hope vertical engines are now built in sizes from 80 to 540 H. P. by the Cooper-Bessemer Corporation for every power service.



Seven 1000 B. H. P. Cooper Gas engines in Houston, pipe lines main line natural gas compressor stations near Edna, Texas. Cooper Four cycle horizontal gas engines are available in sizes from 50 to 1500 B. H. P.

COOPER

ALLIANCE

COOPER - BESSEMER - HOPE

THE *Cooper-Bessemer Corporation* inherits all of the specialized knowledge, all of the rich experience gained by Cooper in the gas field, Bessemer in the oil field, Hope in the power and lighting field. Joined together, these three factors form a triple alliance for greater service, greater research and development, greater reliability and economy in power production.

Ninety-six years ago two Cooper brothers built their first horse-sweep for driving the Cooper cupola at Mt. Vernon. Then came throttling steam engines, locomotives, farm engines, Corliss engines. The first Cooper 4-cycle horizontal gas engine entered compressor service in West Virginia. It is still in constant service, and Cooper has become the leader in furnishing power requirements for the transmission of natural gas through pipe lines. Cooper engines are also in service in refineries, in gasoline plants and in electric plants. In addition, Cooper has been building Diesels.

Thirty years ago the first Bessemer oil field engine entered service in Pennsylvania. Since then Bessemer has been the leading builder of 2-cycle horizontal gas engines for drilling, pumping, pressure work, pipeline pumping, gasoline plants, booster stations and for power service in refineries. In addition, Bessemer has been an outstanding builder of Diesel oil engines.

Twenty-nine years ago the first Hope 4-cycle vertical gas engine was installed. Twenty-eight years later the Hope was acquired and still further improved by Cooper. Each succeeding year has added to the high prestige of this engine for auxiliary power in main line and booster stations — in gasoline recovery plants — for power and lighting plants — in divers industries.

With these three lines combined and standardized, you can now get a Cooper, a Bessemer or a Hope that meets your conditions exactly.

THE COOPER-BESSEMER CORPORATION

Formerly The C. & G. Cooper Company and The Bessemer Gas Engine Company

MOUNT VERNON, OHIO — GROVE CITY, PA.

1116 MAGNOLIA BLDG., DALLAS — 630 E. 61st ST., LOS ANGELES, CAL.

615 KENNEDY BLDG., TULSA, OKLA.

COOPER CB CORP BESSEMER

BESSEMER

MEN KNOWN IN OILDOM

William K. Whiteford

William K. Whiteford, production superintendent of the northern district for the Barnsdall Oil Company, is one of the petroleum industry's youngest production officials and they always call him Bill. Mr. Whiteford was born in Los Angeles, Calif., in 1900, and at 18 he entered Stanford University, financing his studies there with summertime work.

His first oil field job was with the Western Union Oil Company in the pipe line gang. The hard-boiled gang pusher was an old-time pipe liner named Riggs. One day as Bill was industriously man-handling a shovel, Riggs said to him, "It's funny, no matter how long a fellow works on a job, he learns something new every day." Expecting a compliment, Bill pricked up his ears. "You've demonstrated more ways," went on Riggs, "to handle a shovel wrong than I ever thought possible."

When the opportunity arose to take a "swamper's" job, Bill grabbed it, remarking that he "did not know what kind of job it was but it couldn't be worse than pipe lining." During the succeeding summer seasons of his college years, he worked on various production and drilling jobs, from roustabout to rotary and cable tool work.

After graduating in 1922, he had a job on a rotary with the Shell Oil Corporation until he became affiliated with a firm of consulting engineers operated by Martin Van Couvering. As a petroleum engineer with this concern he had contact with the drilling and production problems of small operators in the California fields. After several months' experience he took charge of the branch office at Torrance, Calif., where he was located until May, 1924, when he joined the Barnsdall Oil Company of California as petroleum engineer in the Rosecrans district.

As a member of the American Petroleum Institute, Mr. Whiteford attended the Institute meeting at Tulsa in 1926, which was his first contact with the Mid-Continent Field. In the spring of 1927 he left the position of chief petroleum engineer for the Barnsdall Oil Company of California to take over his present work. With Mrs. Whiteford and their baby boy he resides in Tulsa.

PERSONAL PARAGRAPHS

Gillette Hill, vice president of the Independent Oil & Gas Company, has been spending some time in California.

* * *

M. E. Layne, president of the Layne & Bowler Company, left Los Angeles, Calif., last week for a combined business and pleasure trip to the East Coast.

Minal E. Young, formerly at the head of the New York Oil Company, has returned to Casper, Wyo., from a trip to Idaho.

* * *

J. F. Nagle, branch sales manager of the Skelly Oil Company, Tulsa, spent several days in Houston, Tex., calling on refiners.

* * *

A. W. Peake, president, and F. H. Prior, vice president, of the Dixie Oil Company, were in Tulsa for a short visit from their Shreveport, La., office.

* * *

Andrew A. Brown, who has been engaged in the Egyptian oil fields, has completed his work and returned to his home at Wishaw, Scotland.

* * *

Jim Nowlin, Atlantic Oil Producing Company scout in the Abilene, Tex., district, visited his parents in Glen Rose, Tex., while on his vacation.

* * *

Mr. and Mrs. Ed Dilley, of San Angelo, Tex., visited Dallas recently. Mr. Dilley is secretary and treasurer of the National Oil Scouts Association.

* * *

John Eoghan Kelly has been elected vice president of Southeastern Gas Company, a subsidiary of Inland Utilities, Inc., of Harrisburg and New York.

* * *

Clark F. Barb, professor of petroleum engineering at the Colorado School of Mines is going to Pennsylvania State College to do research work.

* * *

Bernard Gillespie, of Tulsa, recently flew to Los Angeles, Calif., to testify in a court action which has been under way in Los Angeles for the past two weeks.

* * *

C. R. Johnson, production superintendent for the Big Lake Oil Company, at Texon, Tex., Mrs. Johnson and daughter, Christine, are spending their vacation in Kansas and Illinois.

* * *

Waldo Rennie, of Denver, Colo., geologist for the Texas Production Company, visited Casper, Wyo., on his return to Denver after doing some geological work for the company in Wyoming.

* * *

Neil J. Morris, general superintendent of the George F. Getty Company, has severed his connection with that concern to accept a similar situation with the Macmillan Petroleum Corporation.

* * *

Judge Roderick N. Matson, of Cheyenne, Wyo., secretary and treasurer of the Consolidated Royalty Oil Company, and one of the members of the United States Commission to the International exposition at Seville, Spain, has returned to America.

* * *

W. A. Williams, president, J. Stickel, sales manager, and J. T. B. Bowles, technician, Crown Central Petroleum Corporation, Houston, Tex., have returned to their offices after two months spent at their New York headquarters.

* * *

Mr. and Mrs. Bart Myers have returned to the United States for a two months' vacation. Mr. Myers is with Standard Oil interests in Colombia, South America. He was formerly with the Carter Oil Company in the Salt Creek Field.

* * *

R. C. Brand, formerly assistant director of purchases for the Parkersburg Rig & Reel Company, but now director of sales for the Union Chain & Manufacturing Company, of Sandusky, Ohio, is making a western trip in the interest of his company, and spent several days in Tulsa.

* * *

James H. Westcott, author of "Oil, Its Conservation and Waste," has recently returned from Venezuela and the Dutch West Indies where he was engaged in making a survey of producing in Venezuela and refining conditions on the islands of Aruba and Curacao. He reports conditions well in hand for the present year.

* * *

Ford Turner, land man for the Pure Oil Company at San Angelo, Tex., and president of the National Oil Scouts Association, just returned from a vacation trip to Cleveland and Columbus, Ohio. He was best man at the wedding of Val T. Billups, to Miss Dorothy Graff of Evanston, Ill., on June 29. Mr. Billups is land man for the Shell Petroleum Corporation at San Antonio, Tex.

R. S. Ellison, vice president and general manager of the Midwest Refining Company, and George H. Jaques, director and general superintendent of that company, were recent visitors in Denver, Colo.

* * *

W. E. Morrison of Tulsa, of the Sinclair pipe line interests, was in Casper, Wyo., recently. Mr. Morrison was formerly general superintendent of the Sinclair pipe line from Wyoming to Kansas City.

* * *

S. L. Cronin, manager of the land department of the Pure Oil Company, has been in Los Angeles, Calif., for several days. The Pure Oil Company recently filed incorporation papers in California preparatory to active participation in California.

* * *

Ed J. Drake, formerly the South Texas division manager for the Continental Supply Company, but now with the Gray Tool Company, of Houston, Tex., was visiting with his friends in the Mid-Continent area this week.

* * *

T. J. Neilan, president of the Neilan, Schumacher & Company, recently returned from an extended business trip to Chicago, and will be found at his usual headquarters within the next few weeks following a short vacation in the northern part of the State.

* * *

W. H. Meier, petroleum engineer, and Curt Oppell, purchasing agent for the Atlantic Oil Producing Company, of Dallas, Tex., used the modern method of transportation and flew to Tulsa this week, stopping en route to visit in the Seminole Field for a few hours.

* * *

F. G. Forman, of Perth, West Australia, is spending some time in Casper, Wyo., and the Salt Creek oil field studying the geology and production methods of oil and gas in the Rocky Mountain region. Mr. Forman is an independent geologist who has been specializing in Australian formations.

* * *

John G. Pew, land man for the Sun Oil Company, Dallas, Tex., and Miss Roberta Haughton of that city who were married in Dallas, June 27, are spending their honeymoon at Del Monte, Calif., and other points on the West Coast. Mr. Pew is the son of J. Edgar Pew, vice president of the Sun Oil Company.

* * *

John B. Demaria, vice president of the Italo Petroleum Corporation, has been elected president of that company succeeding William Lacy, who has resigned because of the press of other business. Mr. Lacy will remain as a director of the company and no change was made in the directorship as Mr. Demaria has been a director for some time.

* * *

Charles F. Saborin, for the past five years associated with Pan American Petroleum & Transport Company in an executive capacity, has resigned to become associated with the Midsun Oil Corporation as executive vice president. Mr. Saborin had been associated with Dixie Oil Company and Cosden Oil Company previous to his connection with the Pan American.

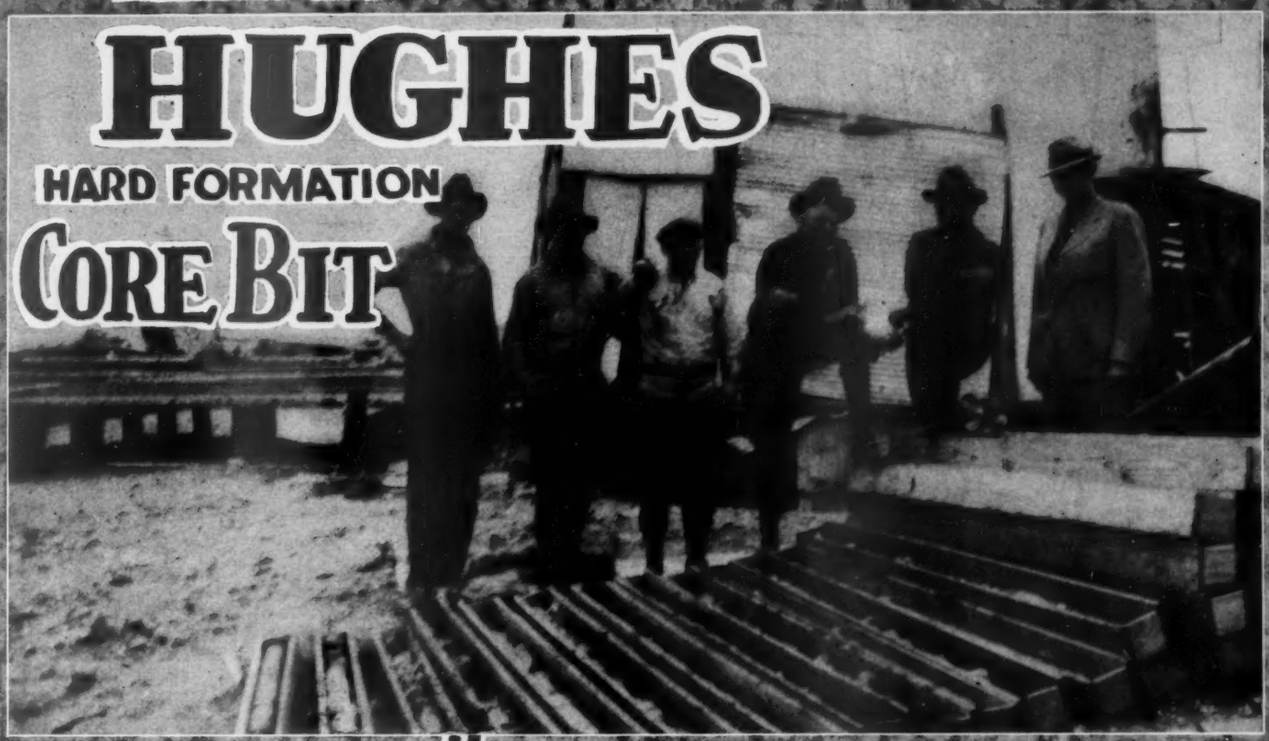
* * *

Nic N. Stefanescu, of Bucuresti, Rumania, prominent oil engineer of Rumania, was in Bradford, Pa., recently observing the Bradford oil field and studying the many details connected with flooding. Mr. Stefanescu was a guest of the National Supply Company. Before coming to Bradford he spent a day at the Ajax Iron Works in Corry, Pa. J. H. Castor, superintendent of the Ajax Iron Works, came to Bradford with the foreign visitor.

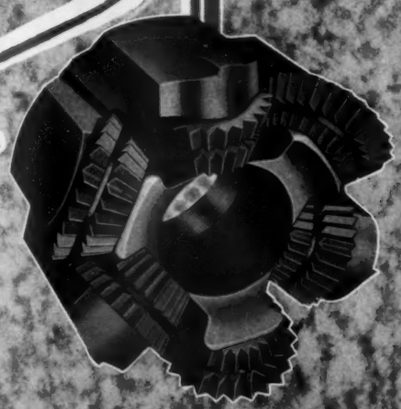
* * *

Dr. Arthur D. Little, president of Arthur D. Little, Inc., Cambridge, Mass., chemists and engineers, delivered his presidential address before the Society of Chemical Industry (London) at Manchester, England, July 9. His subject was "Science and Labor." He called attention to the opportunities for employment created by scientific discovery, offsetting labor displacements by improved manufacturing practice, new industrial processes and invention. During his stay in England, Doctor Little will receive the honorary degree of Doctor of Science from the University of Manchester and Honorary Associateship in the Manchester College of Technology. He expects to return to the United States late in August.

864 feet of Continuous Coring With A HUGHES HARD FORMATION CORE BIT



85% Core Recovery



The above photograph was taken on the Texas-Pacific Coal & Oil Company's State No. 1, Lea County, New Mexico.

Coring was started at 3,131 feet and continued to a depth of 3,995 feet. An 8½" Hughes Hard Formation Core Bit was used and according to O. G. Waller, Tool Pusher on the job, approximately 735 feet of core was recovered—or 85 per cent.

Members of the crew of the Southwest Drilling Company, contractors on the well, are shown in the picture. They are: L. C. (Beanie) Cline, Driller; Burl Freeman, C. C. Turner, C. M. Tidwell, George Boone, and O. G. (Red) Waller.

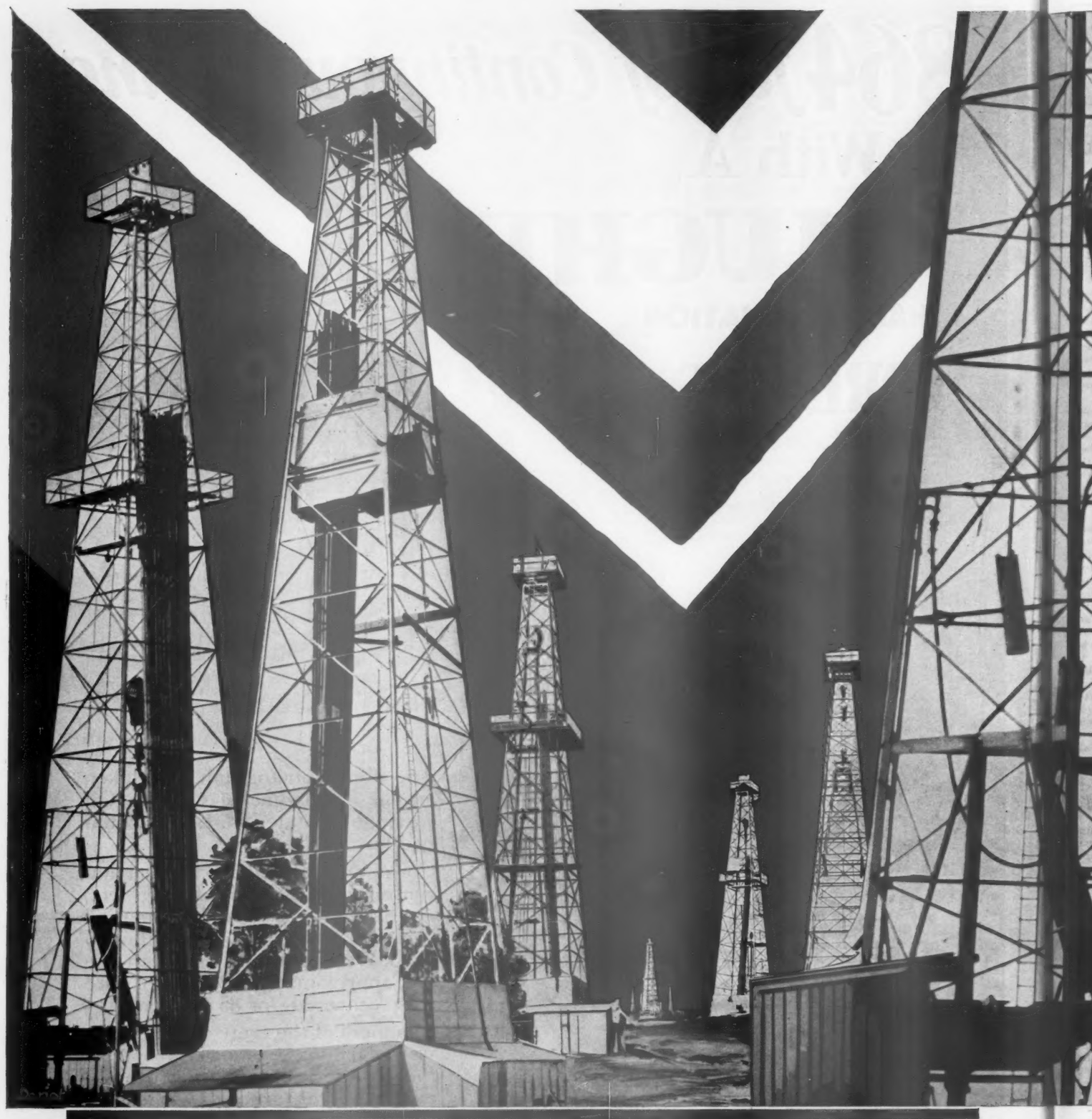
"Sold By Supply Stores Everywhere"

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.

Main Office and Factory
HOUSTON
TEXAS

Export Office
New York City
N. Y.

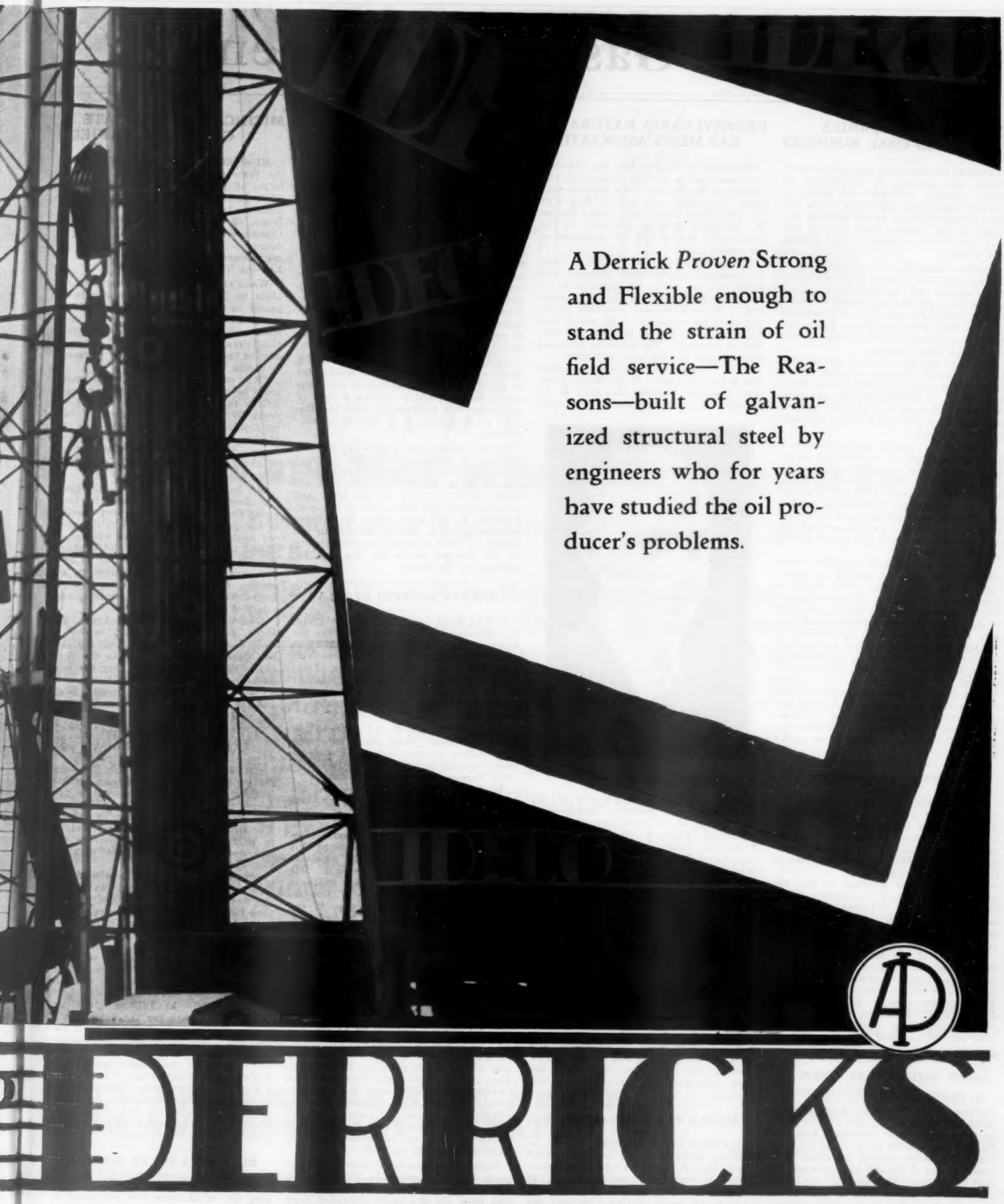


IDECO

GALVANIZED STEEL

The International Derrick & Equipment Company

Columbus, Ohio Los Angeles, Cal.


A Derrick *Proven* Strong and Flexible enough to stand the strain of oil field service—The Reasons—built of galvanized structural steel by engineers who for years have studied the oil producer's problems.
DERRICKS

Plants: Columbus, Delaware, Ohio; Torrance, California; *Sales Offices:* Columbus, Ohio; New York City, N. Y.; Detroit, Michigan; Dallas, Texas; Wichita, Kansas; Los Angeles, California; Maracaibo, Venezuela; *Warehouses and Yards:* Columbus, Ohio; Tulsa, Seminole, Tonkawa, Drumright, Okemah, Wewoka, Maud, Sasakwa, Allen, Earlsboro, Oklahoma City, Oklahoma; El Dorado, Wichita Heights, Kansas; Bakersfield, Taft, Torrance, California; Houston, Hebbronville, Big Spring, Merkel, Odessa, Pyote, Pampa, Borger, McLean, Mexia, Luling, Texas; Shreveport, Lake Charles, Louisiana; El Dorado, Smackover, Arkansas. *Export Representation*—74 Trinity Place, New York City; Columbus, Ohio; Houston, Texas; Los Angeles, Calif. 604

Natural Gas Developments

GAS PROJECT WORRIES CHICAGO COAL BUSINESS

Already trammeled by the wave of efficiency and economy in combustion by public utilities, railroads and other industrial consumers, coal faces a new and more dangerous rival in the midland territory of the country from natural gas, says the Chicago Journal of Commerce, which says:

"Sellers lamenting the slow demand in the Chicago coal market for both steam and domestic, but particularly steam, at a time when steam coals should be fairly active, viewed the prospects of a network of pipe lines from the Texas Panhandle into Chicago and other industrial centers with not a little concern.

"Natural gas already is a decided factor in demand for coal in some of the cities of the central western states. Memphis, Tenn., is burning natural gas from Arkansas; Kansas City has its natural gas, and St. Louis and Chicago are soon to have a supply.

"Cost of the gas to the consumers is not disclosed, but it is expected to be placed on a close competitive basis with coal. In Chicago alone, so far as domestic heating is concerned, it is possible that with an appropriate increase in demand the price of gas manufactured from coal for heating purposes may be reduced, but it is generally believed this is not in the immediately future.

"Natural gas is less expensive than manufactured gas, but one of the problems of the former has always been its uncertainty of supply. It is considered not improbable that the uncertainty may be controlled through manufactured gas, once the pipe lines and the volume of business are secured so that the natural gas invasion should not be treated with the indifference that has characterized the coal industry before.

"Gas is the ultimate competitor of coal, whether it is in the form of natural gas or manufactured gas from coal. It is no pipe dream; it is a stark reality becoming obvious each year, especially in a domestic way."

EASTERN GAS MERGER

NEW YORK July 13.—Plans for the completion of a chain of huge gas producing centers along the Eastern Seaboard by the Koppers interests were revealed in the announcement of an offering of $25,000,000 of Koppers Gas & Coke 5½ per cent bonds.

Proceeds of the offering, it was announced, will be used to acquire a further investment of $21,000,000 in 6 per cent preferred stock and a minority interest in the common stock of the Eastern Gas & Coke Association.

The plan of the Koppers group calls for a chain of modern economical by-product coke plants producing manufactured gas as well as marketable chemicals. These plants will be at Philadelphia, Jersey City, Brooklyn, New Haven, Conn., and Boston. Extensive areas inland will be supplied with gas through pipe lines.

TO DRILL EXRAY FIELD

STEPHENVILLE, Tex., July 13.—Interest in the Exray gas field, 17 miles north of Stephenville, has been aroused by the announcement that Lone Star Gas Co. has leased 6,500 acres out of the Cage ranch, 3½ miles west of the field, for a consideration of $21,000 and agreement to drill three tests. The company has leased an additional 5,500 acres at terms not made public. Rig is up and drilling started on the first of the three tests.

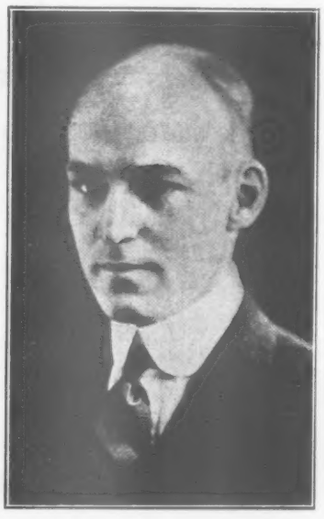
Fourteen wells are on production in the field, gauging from 3,000,000 to 24,000,000 feet.

PENNSYLVANIA NATURAL GAS MEN'S ASSOCIATION

PITTSBURGH, Pa., July 13.—The annual meeting and election of directors and officers of the Pennsylvania Natural Gas Men's Association was held on July 1 at the Pittsburgh Field Club, where George W. Ratcliffe, retiring president of the association, entertained the members as his guests.

Luncheon was served at 12:30 to about 22 members and a very pleasant golf party followed in the afternoon in which the members indulged in "kicker's handicap." Some additional members joined the party for dinner at 6:30, which was followed by the annual meeting and election of directors. The following directors were elected for the year 1929-1930:

T. B. Gregory, vice president, Columbia Gas & Electric Corp.; S. W. Meals, president, Carnegie Natural Gas Co.; B. D. Phillips, vice president and general manager, T. W. Phillips Gas & Oil Co.; F. R. Phillips, vice president, Philadelphia Co.; George W. Ratcliffe, president, Manufacturers Light & Heat Co.; E. S. Templeton, treasurer, Greenville Natural Gas Co.; J. B. Tonkin, vice president and general manager, Peoples Natural Gas Co.; George E. Welker, president, United Natural Gas Co.; George E. Whitwell, vice president in charge of sales of Equitable Gas Co.; E. W. Williamson, assistant general manager, Peoples Natural Gas Co., and George Wittmer, Jr., treasurer, Wittmer Oil & Gas Properties.



George E. Whitwell

Immediately following the annual meeting, the new directors met and elected as officers for the ensuing year the following: George E. Whitwell, president; George E. Welker, vice president, and B. H. Smyers, Jr., secretary-treasurer, attorney for Equitable Gas Co.

The members were unanimous in their decision that the business of the annual meeting had been transacted under the most pleasant and favorable circumstances.

SUPPLY FOR INDEPENDENCE

KANSAS CITY, Mo., July 13.—L. L. Garner, manager of the Jackson County Light, Heat & Power Co. of Independence, which recently was purchased by the Doherty interests, said the company probably would begin supplying natural gas to its customers July 29. Heavy rains and necessary pipe line have hindered the change from artificial to natural gas, Mr. Garner said.

BUREAU OF STANDARDS STUDIES GAS FLAMES

A number of unexpected phenomena in the structure of simple gas flames have been observed by the Bureau of Standards, Department of Commerce, and will be discussed in a report to be issued shortly.

The public in general, the bureau finds, is interested in gas appliances only as conveniences for heating and cooking purposes. For successful operation they must neither produce carbon monoxide gas nor have a tendency to pop back or blow out. They should burn the gas efficiently and deliver the heat where it is required with as little waste as possible.

Designers of gas burners which fulfill these requirements, however, would like to know just what takes place while the gas is burning, and it is with a view of supplying this information that the Bureau of Standards is conducting investigations.

In the forthcoming report are given a number of photographs of the unusual flames encountered, together with a discussion of the peculiarities of their structures. From a study of the form and color parts of the flame, and of the composition of the gases taken from these various parts, it may be possible in the future to write a more complete history of the changes which the gas and air undergo in the flame.

SAFETY MEETING AT IOLA

IOLA, Kans., July 13.—A picnic supper attended by more than 100 was the feature of the monthly business meeting of the Iola district of the Oklahoma Natural Gas Corp. held on the lawn of the residence of C. M. Van Slyke, manager of the district. It was a general "get-together" meeting which emphasized a safety program.

R. S. Huffman, of the district land lease department, Tulsa, gave a talk upon the relations between technical knowledge and practical training and the need for close co-operation between the two.

R. L. Dowden, superintendent of the safety department of the company, also of Tulsa, talked upon practical safety. He referred to the necessity of safety with automobiles and drew the comparison between that and industry. He stated that 80 per cent of the industrial accidents which occurred were unnecessary. He told about the safety trophy which is being offered this year by R. W. Hendee, vice president of the company, to the district with the best record for lost time accidents, and gave it as his opinion that if Iola continues its record, the race is likely to be between this district and the Okmulgee district.

Towns in the Iola district are Blue Mound, Iola, Kincaid, Colony, Welda, Garnett, Greeley, Mound City and Piqua.

UNITED CARBON PLANTS

United Carbon Co. has completed a new carbon black plant at Rock Creek, Tex., and is commencing construction on two more, to be finished in September. This will bring total capacity to about 110,000,000 pounds a year, compared with actual production of 60,525,530 pounds in 1928 and estimated output of 97,000,000 pounds for 1929.

Construction has begun also on a large natural gasoline plant in Richland Parish Field in Louisiana to extract gasoline from the gas to be furnished from that field to the various pipe line systems in St. Louis, Birmingham and elsewhere. This plant is expected to treat 30,000,000 feet of gas daily.

MICHIGAN TO REGULATE GAS WASTE IN FIELD

MUSKEGON, Mich., July 13.—That the State will take a hand in the regulation of gas wastage in the Muskegon Field at once was indicated in a statement made by Commissioner Robert H. Dunn, of the Michigan Public Utilities Commission, at a hearing of the application of the Sterling Oil Corp., now being formed for further development in Laketon Township.

When asked if the new company would abide by the rules and regulations to be placed in force immediately in the Muskegon Field under Floyd R. Frye, new state supervisor of oil and gas conservation, Frank L. Maire, who will be president of the Sterling corporation answered decidedly in the affirmative.

"Not only shall we be glad to co-operate in living up to any rules or regulations that may be established, but we decidedly favor the enforcement of better drilling and operating methods in the Muskegon Field," said Mr. Maire, who is president of the Lima Oil Corp., one of the first large outside operators to enter the western Michigan Field.

Mr. Dunn, who had come to the hearing directly from a conference with Governor Fred W. Green, was very specific in his questions with regard to the present method of operation and what steps should be taken to protect and lengthen the life of the field as well as to protect surrounding leases and property, according to Willard G. Turner, Jr., attorney for the Sterling corporation, who attended the hearing.

In a statement made in Muskegon, Mr. Dunn gave assurance that immediate steps would be taken to prohibit the useless wastage of natural gas in the Muskegon Field. He explained that the conservation department has jurisdiction over oil development from the ground down and the public utilities commission from the well mouth out.

HELIUM IN CANADA

CHATHAM, Ontario, July 13.—According to a recent dispatch from London, England, the British government is preparing to investigate the possibilities of developing helium production in Canada. The British air secretary recently stated in parliament that negotiations to this end would shortly be opened with the Canadian government.

Investigations into the possibilities of obtaining helium from Canadian natural gas were commenced in 1916, shortly before the search for the development of commercial supplies in the United States. The survey showed that many gases in Ontario contained 0.3 per cent of helium.

The greatest potential source of supply was found in the Bow Island gas field in Alberta where, according to estimate, some 12,000,000 feet of helium were being lost annually. In 1919 a plant was erected at Calgary for the extraction of helium from the gas, and was for a time operated; but operations were discontinued. Recently the Ontario government took over three small gas wells at Inglewood in Peel County which showed a high helium content. The production of these wells has been placed at the disposal of the University of Toronto, where Prof. J. C. McLennan has conducted important helium experiments.

BUYS AGUA DULCE HOLDINGS

HOUSTON, Tex., July 13.—United Gas Co. of Houston has purchased the entire holdings of the R. & G. Co. at Agua Dulce, Nueces County, Southwest Texas. The deal involved $40,000 of which $20,000 was cash.

IT HAS BEEN SAID:

"Things are Not what they Seem to Be"

Yes, and that is particularly true about gas burners.

A gas burner is nothing but a mechanical device for mixing air and gas, which it seems should be a very easy thing to do; and while it is no trick at all to get the gas to burn, it is a "horse of another color" to burn it quickly, completely and with a minimum amount of excess air.

The METTLER ENTRAINED COMBUSTION GAS BURNER is the result of 30 years' experience with the combustion of various kinds of gases and the application of gas burners to boilers, stills and furnaces. We know that our burner is right and have proved it in hundreds of installations of all kinds.

Our literature will be sent on request

METTLER BURNERS HAVE NEVER BEEN SUCCESSFULLY IMITATED

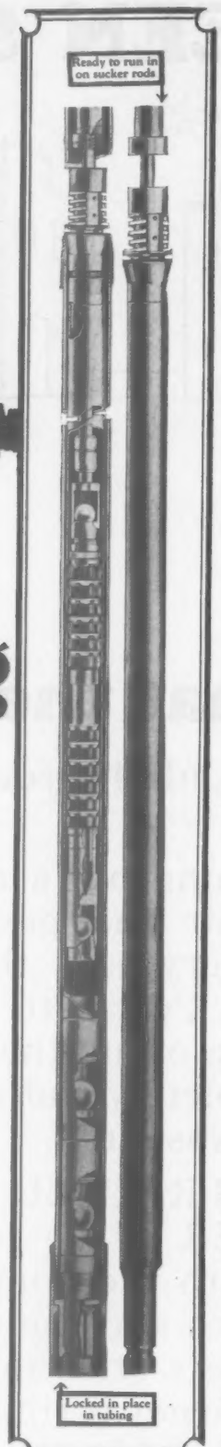
We Welcome an Opportunity to Serve

*Trust One Who Has Had Experience.

LEE B.
METTLER CO.
406 So. Main St.
Los Angeles, Cal.

Please quote Prices on the equipment for the following:

No. of Boilers.....
H. P..... Make.....
No. of Stills.....
Size..... Type.....
Name.....
Company.....
City..... *State*.....



What's wrong with this picture?

Three hundred years ago the blunderbuss was considered a marvelous gun, but compared to the high-powered rifle of today the blunderbuss was a good "noise" machine.

And, today, it's just as ridiculous to use obsolete types of pumps with which pulling tubing is a necessary evil.

A FACT: Thousands of production-men throughout the world have found that EPCO PUMP eliminates the necessity for pulling tubing 99 out of a 100 times.

EPCO PUMPS will pay for themselves over and over again in real savings. They will cut down your rod jobs, obtain maximum production and make real savings in fuel and repairs.

These and other advantages have made EPCO the outstanding production improvement in recent years.

Ask anyone.

"Economy is Right"

The Economy Pump & Oil Tool Co.

LOS ANGELES

Offices and Factory: 4424 E. 49th St., Los Angeles, Calif., U. S. A. Office and Warehouse: Ft. Worth, Texas. Representatives at Tulsa, Bristow, Ponca City, Duncan, Seminole and Earlsboro, Oklahoma; Fort Worth, Beaumont, Big Spring and Houston, Texas; Shreveport, Louisiana; also Representatives and distributing points at Long Beach, Huntington Beach, Santa Fe Springs, Taft and Bakersfield, California, or any National Supply Company Store throughout the world.

DISTRIBUTED BY
THE NATIONAL SUPPLY COMPANIES

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

(Continued from Page 51)

HUGHES COUNTY

Whitney et al's No. 1 Moore, SE SW Sec. 17-5-9 .....Shut down 3,910 ft.
McGee Co.'s No. 1 fee, SE cor. Sec. 25-8-11e .....Drlg. 3,400 ft.
The Texas Company's No. 1 Bryan, SE NE SW Sec. 9-6-8e .....Plugging back to 2,660 ft.

JACKSON COUNTY

Altus Oil Co.'s No. 1 Northington, NE cor. NE Sec. 4-1-20w .....Shut down 2,020 ft.

KINGFISHER COUNTY

Galt Brown's No. 1 Wolf, NW SE Sec. 6-16-7w .....Fishing 5,195 ft.
McKenna & Crawford's No. 1 Sturgeon, NE cor. SW Sec. 27-16-6w .....Shut down 4,895 ft.

KIOWA COUNTY

Hyde et al's No. 1 Jones, SE cor. Sec. 23-3-18w-50 .....Shut down 118 ft.
S. H. Christian's No. 1 Stone, SE cor. Sec. 18-7-18w ....Rig on ground.
Merrick Oil Co.'s No. 1 Kelly, NW cor. SE Sec. 20-7-17w..Shut down 1,035 ft.
McWharter and others' No. 1 Sherwood, CWL NW NE Sec. 2-5-17w .....Shut down 680 ft.

LEFLORE COUNTY

Red Bank Oil Co.'s No. 1 fee, SE SW NE Sec. 23-9-24 ....Drlg. 2,795 ft.

LATTIMER COUNTY

Limestone O. & G. Co.'s No. 1 Shaw, NW cor. NE NW Sec. 23-5-18e .....Rig.
Limestone Oil & Gas Co.'s No. 1 McMurray, SW cor. SW Sec. 15-5-18 .....Fishing 3,954 ft.

LINCOLN COUNTY

Phillips Pet. Co.'s No. 1 Stephens, SE cor. NW Sec. 29-12-3 .....Rig.
Morgan & Flynn's No. 1 Finlay, SW cor. SW Sec. 19-16-6 .....Drlg. 3,900 ft.

LOGAN COUNTY

Haley & Smith's No. 1 Guier, SE cor. SW Sec. 33-18-3w..Shut down 3,970 ft.

McINTOSH COUNTY

Holden's No. 2 Phillips, C SE SE Sec. 3-9-18e .....Spudding.
Spring Valley Oil Co.'s No. 1 Carr, SE cor. NE NW Sec. 16-10-13e .....Drlg. 1,600 ft.
Patterson and others' No. 1 Smith, SW cor. NW SE Sec. 32-9-16 .....Shot 240 qts. 5,446-5,559 ft.; shot went off up hole; shut down.
Wolfe and others' No. 1 Unknown, NW cor. SE Sec. 15-12-18 .....Rig on ground.

MAJOR COUNTY

Earl and others' No. 1 Turner, C NE NE Sec. 23-20-14w..Rig.
Wilson and others' No. 1 Unknown, NE cor. NE Sec. 4-23-16w .....Shut down 510 ft.

MUSKOGEE COUNTY

Bradley's No. 1 Anderson, NW NW SW Sec. 26-15-19e ..Drlg. 400 ft.
Cooper-Badget's No. 1 Young, NW NE NE Sec. 7-12-20e..Shut down 50 ft.
Tulkogee Oil Co.'s No. 1 Thompson, NW NE Sec. 31-15-20e .....Machine.
Slusher's No. 1 Barnes, NE cor. Sec. 22-13-19e .....Machine.
J. L. Slusher's No. 1 Nave, NE cor. SW NW Sec. 20-15-20 .....Shut down 775 ft.

NOBLE COUNTY

Gypsy Oil Co.'s No. 1 Bailey, C NE NE Sec. 24-22-1e ....Drlg. 2,000 ft.
Magnolia Petroleum's No. 1 King, C SE SW Sec. 26-20-1w..Drlg. 1,100 ft.

OKFUSKEE COUNTY

Superior and others' No. 1 Carolina, SE cor. Sec. 6-11-7e .....Location.

OKLAHOMA COUNTY

Mid-Kansas' No. 1 Trosper, NE NW Sec. 19-12-1w .....Rigging up standard tools 5,508 ft.
Hall & Briscoe's No. 1 Holmes, NE cor. SW SE Sec. 10-11-3w .....Shut down 4,750 ft.

PITTSBURG COUNTY

Galbreath's No. 1 Snyder, C W half SW Sec. 28-4-13 ....Rig.
Empire O. & R. Co.'s No. 1 Unknown, C NE SE Sec. 33-7-16e .....Location.
Kerr & Koy's No. 1 Hall, C NW NW Sec. 33-4-12 .....Drlg. 2,350 ft.

PONTOTOC COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 Shoate, C NE SE Sec. 1-4-4 .....Location.

POTTAWATOMIE COUNTY

Amerada's No. 1 Vineyard, NW NE NE Sec. 15-7-3 .....Rig.
Gypsy Oil Co.'s No. 1 Randosh, NW NE Sec. 23-6-4 .....Rig.
Frank Moore's No. 1 Fundis, SE NE Sec. 19-7-3 .....Location.
Phillips Pet. Co.'s No. 1 King, NW cor. Sec. 26-8-4 .....Spudding.
Sinclair and Mid-Continent's No. 1 Cumings, SE NE SE Sec. 6-7-5 .....Drlg. 3,000 ft.
Shaffer and Margay's No. 1 Murphy NW NE Sec. 11-6-3 .....Drlg. 1,800 ft.
Cal-Cul Oil Co.'s No. 1 McKnight, NW cor. NE NW Sec. 9-8-3 .....Spudding.

ROGER MILLS COUNTY

Bucy & Stone's No. 1 William, C SW Sec. 23-12-24w .....Location.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ....Drlg. 1,300 ft.

SEMINOLE COUNTY

Harris' No. 1 Harjocke, SE NE SE Sec. 8-6-6 .....Location.
Prairie's No. 1 Mingo, NW NE Sec. 25-6-6 .....Bad hole 2,262 ft.
Indian Territory Illuminating Oil Co.'s No. 1 Factor, SW NE SE Sec. 3-5-7e .....Water 4,757 ft.
Continental Oil Co.'s No. 1 Proctor, SE cor. NE NE Sec. 5-8-8e .....Drlg. 4,288 ft.
McCulloch Oil Co.'s No. 1 Powell, NW cor. NW Sec. 11-6-5 .....Hole full water 4,525-52 ft.; abandoned.

SEQUOYAH COUNTY

Hunt and others' No. 1 Unknown, SE cor. NW SW Sec. 12-12-23 .....Shut down 1,105 ft.
Buffington and others' No. 1 Melcher, C SW NW Sec. 31-12-24 .....Shut down 3,000 ft.

WOODS COUNTY

Peerless O. & G. et al's No. 1 Cromwell, SW SE Sec. 14-28-16w .....Rig on ground.
E. K. Miller's No. 1 Copenhavers, NW cor. NW Sec. 18-24-13w .....Rigged up and shut down.
Gypsy-Prairie and others' No. 1 Thompson, SE cor. SW Sec. 10-25-15w .....Drlg. 5,577 ft.
Sinclair Oil & Gas Co.'s No. 1 Steward, C SW SW Sec. 33-27-16w .....Drlg. 4,235 ft.

WOODWARD COUNTY

Farrond et al's No. 1 Unknown, SE cor. SW SE Sec. 2-23-17w .....Shut down 1,387 ft.
Prairie Oil & Gas Co. and others' No. 1 James, NE cor. NW Sec. 23-23-17w .....Rigging up standard tools 4,298 ft.
Billy's Oil Co.'s No. 1 Watt, C SE Sec. 9-23-20w .....Shut down 3,813 ft.
Burgoyne Brothers' No. 1 Merkins, SW cor. SE NE Sec. 15-21-19w .....Shut down 1,910 ft.
Wilson and others' No. 1 Unknown, NE cor. SW Sec. 4-23-16w .....Shut down 510 ft.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Wapanucka Oil Co.'s No. 1 Banks, CWL SE SE Sec. 28-2s-9 .....Shut down 1,530 ft.

BRYAN COUNTY

Wheeler & Wiley's No. 1 Pitts, NW cor. Sec. 36-6s-9e..Underreaming 723 ft.
Yale Oil Syndicate's No. 1 Craige, C NW NE Sec. 36-9s-9e .....Drlg. 1,545 ft.

CARTER COUNTY

L. J. Woodruff's No. 1 Zellnear, NE cor. NW SE Sec. 34-4s-1 .....Drlg. 1,355 ft.
Avon-Dickey's No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 .....Shut down 420 ft.

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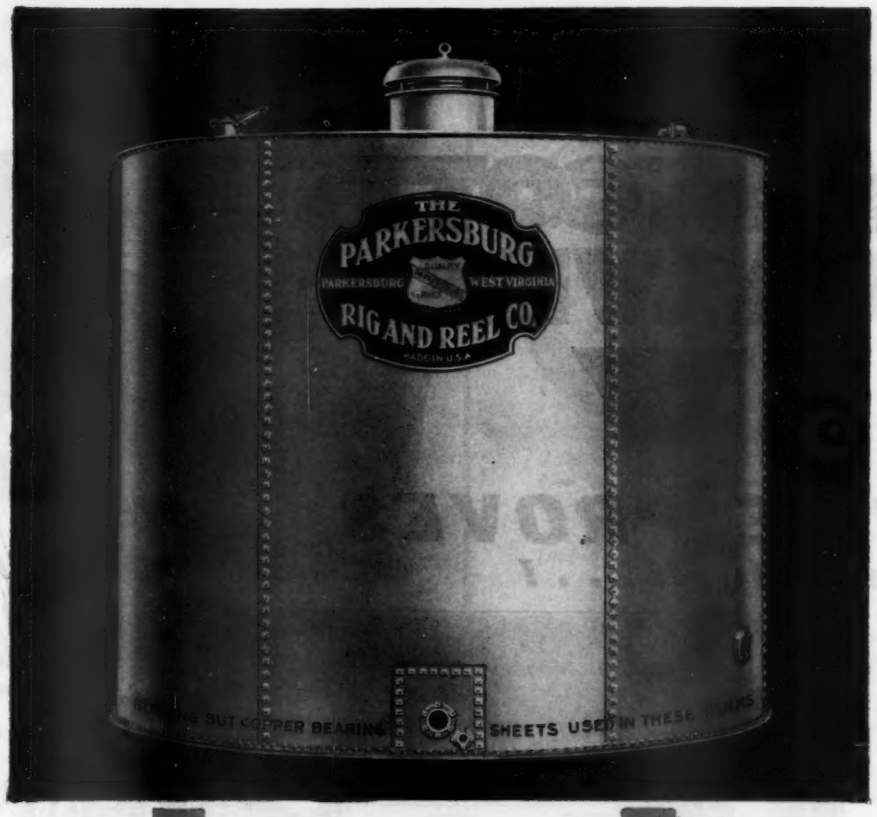

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All-Steel Standard Rigs	■	Miscellaneous Drilling Equipment	■

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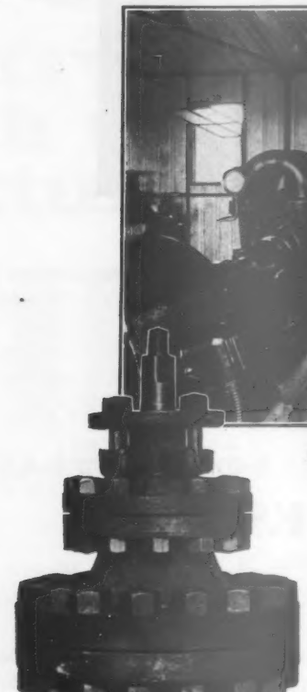

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CONTINENTAL

CHOCTAW COUNTY

Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6-9 ....Shut down 1,346 ft.

COTTON COUNTY

Fain & McGaha's No. 1 Mason, NW SW SW Sec. 29-4-11w ....Rig.
Hedrick et al's No. 1 Bull, SW SE Sec. 3-1S-10w ....Shut down 2,303 ft.
Birdwell et al's No. 1 Means, SE SW SW Sec. 24-1-11w..Shut down 1,900 ft.
Amerada Pet. Corp.'s No. 1 Dulaney, SE cor. NW NW Sec. 31-4-9w ....Drlg. 2,940 ft.

JEFFERSON COUNTY

J. A. Porter's No. 1 Paddock, NE NW NE Sec. 35-5S-7w ..Location.
Gypsy and Roy Johnson's No. 1 Unknown, NW SE SE Sec. 2-7S-7w ....Abandoned 1,940 ft.
Danciger et al's No. 1 Dilley, SE NW (O.D.D.) Sec. 11-5-7w ....Abandoned 2,515 ft
Alter and others' No. 1 Johnson, SW cor. NW Sec. 14-4-7.Abandoned 350 ft.

JOHNSTON COUNTY

Smith & Knisely's No. 1 Lane, E half Sec. 29-1-7 ....Shut down 2,090 ft.
Bush Creek Oil Co.'s No. 1 Kirby, SE cor. NE NW Sec. 9-4-7 ....Abandoned 405 ft.

MARSHALL COUNTY

Neif & Sneed's No. 1 Goff, SE NE SE Sec. 21-7S-5 ....Location.

McCURTAIN COUNTY

Milton et al's No. 1 Pruitt, NE SE SW Sec. 22-6S-21 ....Abandoned 610 ft.
Milton et al's No. 1 Vase, SW NW Sec. 26-6S-21 ....Drlg. 720 ft.

MURRAY COUNTY

Bison Oil Co.'s No. 1 Labor, NW cor. Sec. 17-1-2e ....500,000 ft. gas and show of oil 2,185-2,228 ft.; cleaning out 2,279

STEPHENS COUNTY

Pace and others' No. 1 Woolsey, SE SW NE Sec. 4-3S-6w ....Rig.
Leath et al's No. 1 Handley, SE SW Sec. 24-2-9w ....Drlg. 1,804 ft.
Wirt Franklin Pet.'s No. 1 Spain, SW SE NW Sec. 9-2-5w ....Drlg. 3,192 ft.

TILLMAN COUNTY

Cochran & Ridgway's No. 1 Barnes, C NW NE ....Cellar.
Landfair and others' No. 1 Smith, SE SW SE Sec. 6-2S-15w ....Shut down 2,535 ft.
Allen & Treadwell's No. 1 Howell, NW cor. SE Sec. 13-1-17w ....Shut down 820 ft.

OKLAHOMA PANHANDLE

Magnolia Pet. Co.'s No. 1 School, C SE NE Sec. 22-5-5....Water 4,105-25 ft; shut down.
Skaer's No. 1 Hitch, NW cor. Sec. 25-1-15e ....Shut down 250 ft.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 52)

HARPER COUNTY

Tom Slick Oil Co.'s No. 1 Unknown, SE cor. Sec. 13-34-8w ....Rig on ground.
Tom Slick Oil Co.'s No. 1 Thompson, NW cor. Sec. 10-32-6w ....Rig.
Independent & Reserve Oil Co.'s No. 1 Moulds, C NE Sec. 7-24-1w ....Drlg. 2,070 ft.

HARVEY COUNTY

Payne and others' No. 1 Ady, NE NW SE Sec. 16-24-1....Rig.
Deering-Marshall's No. 1 Dick, Sec. 4-25-2w ....Fishing 2,345 ft.
McCulloch et al's No. 1 Prouty, NW cor. SW Sec. 2-23-1w ....Fishing 2,020 ft.
Roth & Parrent's No. 1 Brombrowsky, NW cor. Sec. 26-22-1e ....Fishing 3,415 ft.
Mrs. Gay et al's No. 1 Grove, C NW NE NW Sec. 29-23-1w ....Shut down 3,012 ft.
Slick & Cornell's No. 1 Gatz, NW cor. SE Sec. 36-22-1e...Shut down 3,695 ft.; water.
Jolly & Ogg's No. 1 Randall, NE cor. NE Sec. 11-24-1w..Shut down 3,444 ft.
Patton et al's No. 1 Dunning, SE cor. SW NE Sec. 26-24-2.Shut down 3,450 ft.
Rosenthal et al's No. 1 Ingalls, C NW SW Sec 24-23-3w..Drlg. 2,835 ft.
Jolly & Ogg's No. 1 Hupp, SE cor. NE Sec. 22-23-1w ....Fishing 3,220 ft.

HODGEMAN COUNTY

Phillips Pet.'s No. 1 Hausman, NW NE Sec. 30-22-22w ..Spudding.

JEFFERSON COUNTY

Wichita Oil Co.'s No. 1 Simpson, NW cor. SW SW Sec. 19-10-17 ....Rigged up and shut down.

KIOWA COUNTY

Wilcox Oil & Gas Co.'s No. 1 Woodward, NE cor. Sec. 35-27-17w ....Drlg. 3,885 ft.
British American-M. M. Valerius, NE cor. Sec. 35-27-17w..Location.

KINGMAN COUNTY

Gypsy Oil Co.'s No. 1 Kincaid, NE cor. NW Sec. 18-29-5w ....Drlg. 4,295 ft.

LANE COUNTY

Robinson's No. 1 Dickerson, Sec. 11-18-27w ....Shut down 2,650 ft.
Blankenship Pet. Co.'s No. 1 Schaeffer, NE cor. NE Sec. 24-16-28w ....Spudded and shut down.

MARSHALL COUNTY

Skelly Oil Co.'s No. 1 Mehl, NW NE Sec. 11-2S-4e....Drlg. 2,590 ft.
Irwin et al's No. 1 Cooper, NE NW Sec. 10-3-7e....Shut down 2,240 ft.
Empire O. & R. Co.'s No. 1 Scally, SW NE NE Sec. 28-1S-2e ....Drlg. 3,105 ft.

MARION COUNTY

Shell Pet. Corp.'s No. 1 Scully, NW NE Sec. 34-18-2e ....Drlg. 1,060 ft.
Hobworth et al's No. 1 Skiles, SE NW NW Sec. 30-21-3e..Drlg. 2,425 ft.
General Utilities Co.'s No. 1 Propp, NE cor. SE SW Sec. 8-19-4e ....Drlg. 660 ft.
Frank L. Moore's No. 1 Miller, NE cor. NE Sec. 26-19-1..Drlg. 3,170 ft.

McPHERSON COUNTY

Lario et al's No. 1 Diener, SE SW Sec. 10-20-1w ....Location.
Perry et al's No. 1 Wade, C SE Sec. 20-19-4w ....Location.
E. W. Marland's No. 1 Swanson, NE SW NE Sec. 36-18-4w.Spudding.
Slick, Pryor & Lockhart's No. 1 Gratton, C NE NW NW, Sec. 34-20-3w ....Drlg. 2,075 ft.
Helmerich & Payne's No. 1 Klassen, SE NE NE Sec. 14-21-1w ....Drlg. 1,140 ft.
McPherson Oil & Gas Co.'s No. 1 Decker, C SE Sec. 11-19-2w ....Drlg. 2,892 ft.
Helmerich & Payne's No. 1 Rosen, NE cor. SE SW Sec. 25-21-2w ....Drlg. 2,950 ft.
McPherson Gas Co.'s No. 1 Chinberg, NW cor. Sec. 18-19-2w ....Drlg. 2,745 ft.
McPherson O. & G. Co.'s No. 1 Rasmusson, SW cor. Sec. 8-18-3w ....Drlg. 2,445 ft.
Ted Washabaugh's No. 1 Vosshell, NE cor. NE Sec. 9-21-3w ....Fishing 3,301-04 ft.; show of oil.
McPherson Gas Co.'s No. 1 Reitz, NW cor. SE SW Sec. 1-20-2w ....Drlg. 2,935-66 ft., 1,090 bbls.
J. H. Tatlock's No. 1 Hayer, C SW NE Sec. 32-20-1w....Shut down 3,081 ft.

NORRIS COUNTY

Hiatt et al's No. 1 Blythe, NW NE Sec. 15-5e....Underreaming 2,250 ft.

NESS COUNTY

E. W. Marland, Inc.'s No. 1 Moses, NE SE Sec. 7-18-25w.Drlg. 1,200 ft.
Barnsdall Oil Co.'s No. 1 Lauk, C SW Sec. 35-18-21w....Drlg. 4,412 ft.

OSBORNE COUNTY

Phillips Pet. Co.'s No. 1 Greive, NW SE NE Sec. 6-7-12w.Drlg. 360 ft.
Mid-Kansas' No. 1 Boyce, SE cor. NW Sec. 18-6-13w....Drlg. 500 ft.
Trees Oil Co.'s No. 1 Payenter, NE cor. SE SE Sec. 22-6-15 ....Drlg. 2,665 ft.
S. D. Jarvis' No. 1 Jellison, SE cor. SE Sec. 13-10-15w...Shut down 3,510 ft.

OTTAWA COUNTY

Anderson et al's No. 1 Bank, NE cor. NW Sec. 25-10-2w..Shut down 3,755 ft.

PAWNEE COUNTY

F. C. Troupe's No. 1 Lovett, CEL NE NE Sec. 31-21-16w.Shut down 1,560 ft.

(Continued on Next Page)

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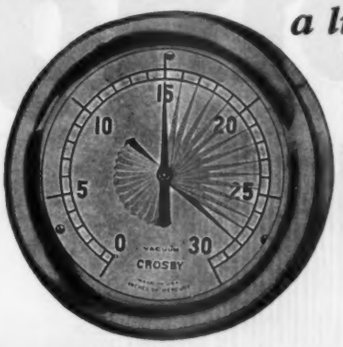

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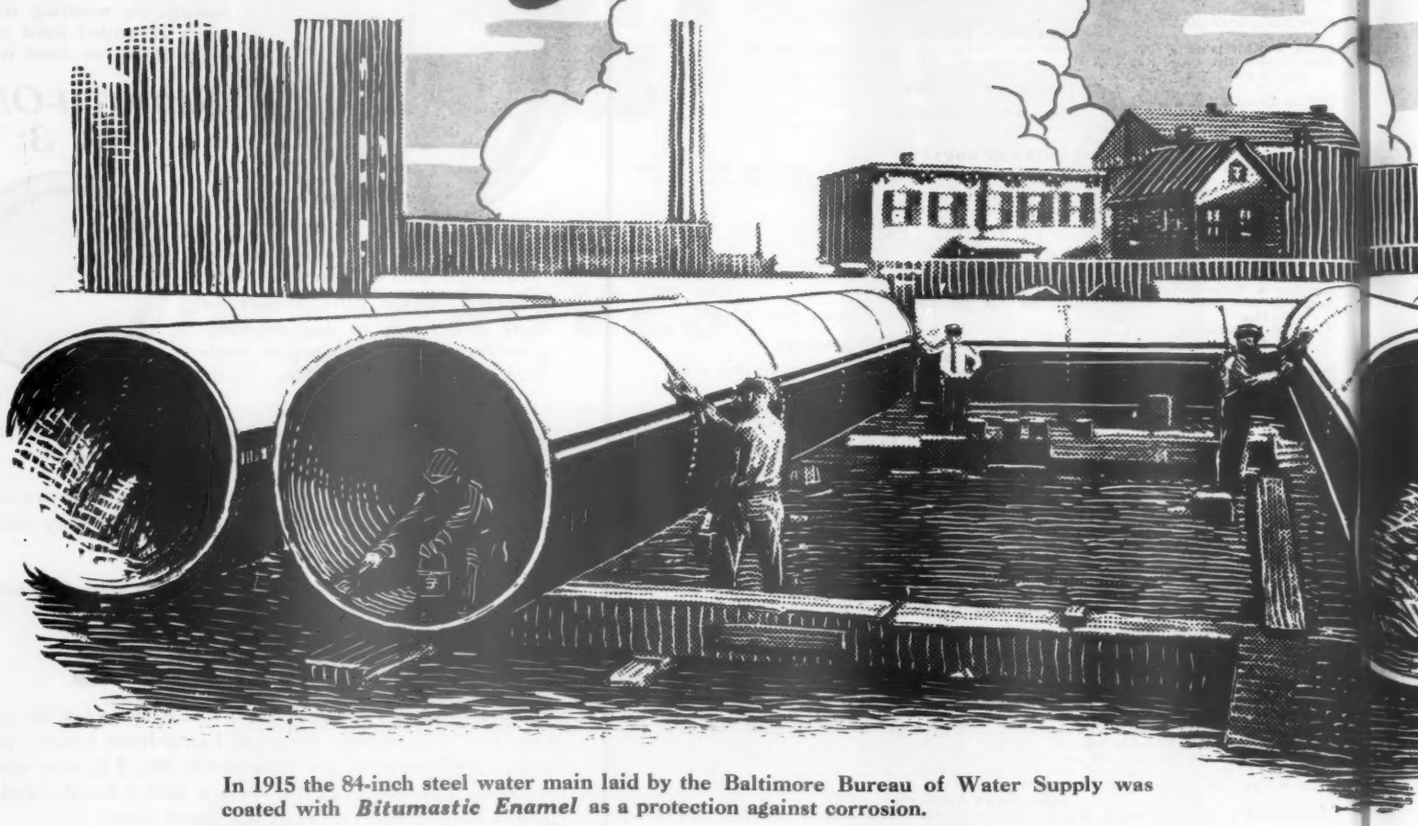

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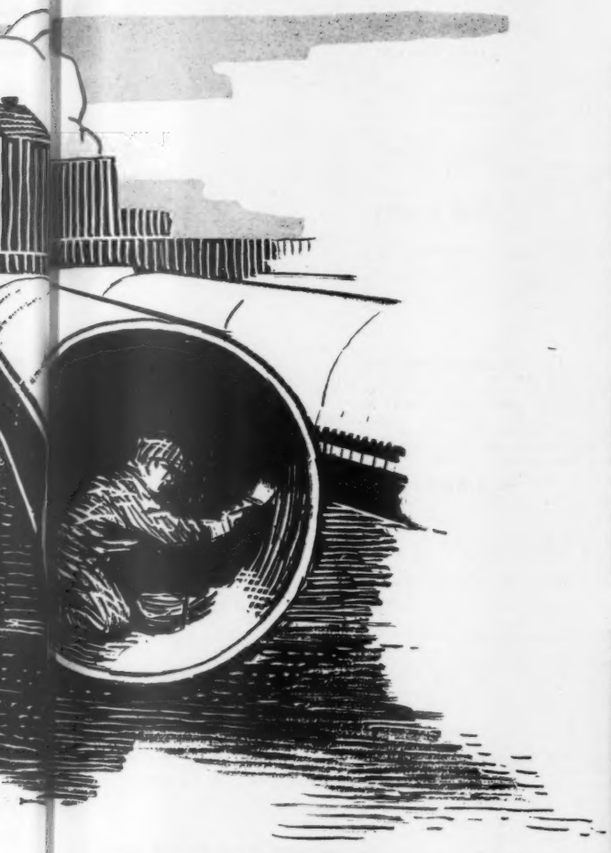

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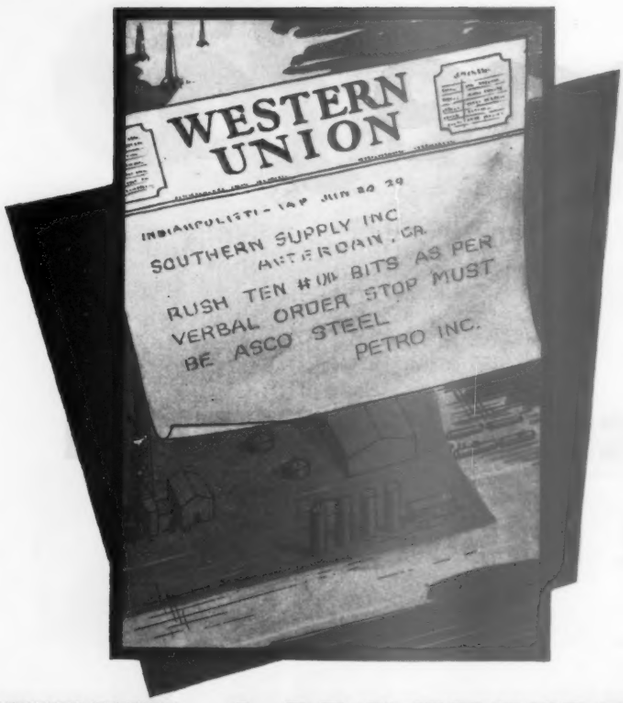

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THE ANDREWS STEEL CO.
NEWPORT KENTUCKY

PHILLIPS COUNTY

Watsonian-British American's No. 1 Wellman, C SW SW Sec. 34-2-19w ..... Drlg. 2,830 ft.

PRATT COUNTY

O'Haver & Jones' No. 1 Lunt, C SW NW Sec. 15-28-14w .. Fishing 2,540 ft.

RENO COUNTY

Empire O. & R. Co.'s No. 1 Henderson, SW cor. Sec. 35-25-4w ..... Drlg. 3,630 ft.
Skelly Oil Co.'s No. 1 Birkett, NE SW Sec. 30-24-7w .... Drlg. 750 ft.
Perry et al's No. 1 Oswald, NE cor. NE SE Sec. 30-22-5w ..... Water 4,065-72 ft.; shut down.
Milmar Oil Co.'s No. 1 Strickley, SW cor. SW Sec. 17-26-5w ..... Drlg. 2,870 ft.

RICE COUNTY

Milmac's No. 1 Cain, C SE Sec. 29-19-7w ..... Rig on ground.
Allison & Fitzwilliams' No. 1 Poland, NE cor. SW NE Sec. 36-19-8w ..... Cellar.
Higgins & Steinbuchel's No. 1 Shurr, NE cor. SW Sec. 21-20-10w ..... Drlg. 3,005 ft.

RILEY COUNTY

Grey et al's No. 1 Smith, NE SE Sec. 30-6-6 ..... Drlg. 1,200 ft.
Derby & Shaw's No. 1 Lindstrom, NE cor. Sec. 32-7-5e .. Drlg. 945 ft.

RUSSELL COUNTY

Allison & Fitzwilliams' No. 1 Mohenny, NW SE Sec. 5-14-12w ..... Drlg. 3,218 ft.
T. B. Slick's No. 1 Sellans, SW cor. NE Sec. 36-15-13w ... Completed 3,348-55 ft.; 250 bbls.

ROOKS COUNTY

Kruger et al's No. 1 Stels, NW SE SW Sec. 12-9-16w .... Shut down 50 ft.
Burford-Brim's No. 1 Toxa, Sec. 22-9-17w ..... Spudded; shut down.
Prairie O. & G. Co.'s No. 1 Gick, SE cor. Sec. 22-9-19w .. Drlg. 3,780 ft.

RUSH COUNTY

Sinclair Oil & Gas Co.'s No. 1 Seur, C SW NW NW Sec. 8-18-17w ..... Drlg. 3,270 ft.
Danciger Oil Ref. Co.'s No. 1 Swindt, SW cor. Sec. 22-17-17w ..... Drlg. 3,582 ft.
Barnsdall Oil Co.'s No. 1 Brock, C SE SE Sec. 21-17-17w ..... Drlg. 3,470 ft.
Central Commercial Oil Co.'s No. 1 Brock, SE cor. SW SW Sec. 12-17-16w ..... Shut down 50 ft.
Danciger Oil Ref. Co.'s No. 1 Pivonka, NE cor. SW NE Sec. 17-19-17w ..... Fishing 3,540 ft.

SALINE COUNTY

Austin et al's No. 1 Olsen, NW SW SE Sec. 10-15-4w .... Rig.
Templeman's No. 1 Lanbengager, C SW Sec. 20-15-5w .. Rig.
Kinney-Coastal's No. 1 Hughes, NW NE NW Sec. 20-13-4w ..... Shut down 50 ft.
Dixie Oil Co.'s No. 1 Muir, C SW SE Sec. 6-15-2w ..... Drlg. 2,890 ft.
Boyle et al's No. 1 Miller, SW cor. SE Sec. 21-16-1w .... Drlg. 3,250 ft.
Kenney-Coastal Oil Co.'s No. 1 Beal, C NW Sec. 23-14-5w ..... Drlg. 3,740 ft.

SEDGWICK COUNTY

C. B. Davis' No. 1 Kinkead, NE cor. Sec. 14-27-1 ..... Rig on ground.
Marland and Amerada's No. 1 Sensroth, NW cor. Sec. 25-28-4w ..... Rig.
Boyle's No. 1 Sandusky, NW NE SE Sec. 34-26-1w ..... Spudding.
Lario O. & G. Co.'s No. 1 Calkins, SW cor. SE Sec. 7-27-2e ..... Drlg. 735 ft.
E. W. Marland's No. 1 Huggins, SE NW SW Sec. 30-27-2 ..... Drlg. 710 ft.
Johnson & Marshall's No. 1 Roy, NE cor. SE SW Sec. 23-29-1w ..... Drlg. 2,123 ft.
Lario O. & G. Co.'s No. 1 Teachorff, NE cor. SW Sec. 27-29-1w ..... Drlg. 2,035 ft.
Kyle et al's No. 1 Pinney, SW NW SE Sec. 29-28-1w .... Shut down 50 ft.
Simmons & Canary's No. 1 Scott, NE NW NE Sec. 22-26-1e ..... Drlg. 2,630 ft.
T. B. Slick's No. 1 Rosenhagen, SW SE NE Sec. 32-27-4w ..... Drlg. 4,095 ft.
Hammond & Stout's No. 1 Roeder, SW NW Sec. 23-27-2w ..... Drlg. 3,100 ft.
Twist et al's No. 1 Armstrong, NE NW Sec. 28-26-1e .... Rig; spud; shut down.
Shawver et al's No. 1 Scott, SE cor. SW SW Sec. 10-28-1e ..... Setting 8-in. csg. 3,065 ft.
Barnett O. & G. Co.'s No. 1 Davidson, NW cor. NW SW Sec. 27-26-1e ..... Shut down 2,668 ft.
Kellar & Lewis' No. 1 Buckles, NW cor. SE Sec. 3-28-1w .. Fishing 975 ft.
Magnolia Pet. Co.'s No. 1 Wise, NW cor. NW Sec. 36-28-2w ..... Hole full water 3,889-90 ft.; shut down.
Blankenship et al's No. 1 Tuttle, SW cor. NW Sec. 1-27-1 ..... Hole full water 3,397-3,410 ft.; P. B. to 2,988 ft.
Twist et al's No. 1 Joseph, CNL SW SE Sec. 4-25-1w ... Shut down 1,980 ft.
Miller Wentz' No. 1 Shaffer, NE cor. NE Sec. 9-27-2w ... Drlg. 3,480 ft.
Kroder et al's No. 1 Harden, SW cor. NW SW Sec. 20-26-1e ..... Shut down 1,100 ft.
Washabaugh et al's No. 1 Harrison, NW cor. NE NE Sec. 3-26-2w ..... Drlg. 1,660 ft.
Sullivan et al's No. 1 Shelly, NW cor. NE SE Sec. 32-29-2e ..... Hole full water 3,555-63 ft.; shut down.
Hartman & Skaer et al's No. 1 Hutchinson, SE cor. SE SW Sec. 23-28-3w ..... Abandoned 4,235 ft.
Producers Oil Co.'s No. 1 Jones, SW cor. NE SE Sec. 31-26-2 ..... Hole full water 3,357-75 ft.; shut down 3,409 ft.; total depth 3,505 ft.
LaFont et al's No. 1 Carlton, C SE SE SW Sec. 24-28-1e .. Drlg. 1,680 ft.
Connell & Slick's No. 1 Mohannah, C NE SE SE Sec. 3-25-1w ..... Hole full water 3,563-86 ft.; shut down; total depth 3,652 ft.; abandoned.

SHERMAN COUNTY

A. L. Henson et al's No. 1 Murry, NE cor. SE NW Sec. 22-7-40w ..... Shut down 3,035 ft.

STEVENS COUNTY

Trees Oil Co.'s No. 1 Thompson, C NE SW Sec. 3-35-38w .. Shut down 500 ft.
W. Sidwell et al's No. 1 Kelly, SW cor. NE Sec. 16 34-38w ..... Shut down 1,320 ft.

SMITH COUNTY

Phillips Pet.'s No. 1 Clydesdale, SE NW Sec. 23-5-14w ... Drlg. 850 ft.

SUMNER COUNTY

E. K. Cary and Lorado Oil Co.'s No. 1 Walsch, SW SE Sec. 9-34-1e ..... Skidded rig, drlg. 600 ft., new hole.
Mid-Continent Pet. Corp.'s No. 1 Clark, SE cor. Sec. 31-34-3w ..... Rig on ground.
Shell Pet. Corp.'s No. 1 Armstrong, NE cor. Sec. 12-33-1e. Location.
Gypsy & Blankenship's No. 1 Robeck, C SW SW Sec. 27-34-4w ..... Drlg. 4,624 ft.
Davidson et al's No. 1 Strickland, SW cor. SE Sec. 12-35-1w ..... Rig.

TREGO COUNTY

Mid-Kansas' No. 1 Ridgeway, NE SW Sec. 28-12-21w .... Rig.
Day et al's No. 1 Gugler, SW NE NE Sec. 36-12-21w .... Shut down 50 ft.
Day et al's No. 1 Unknown, NE NW SW Sec. 2-11-21w ... Drlg. 1,190 ft.
Central Commercial Oil Co.'s No. 1 Ellis, NE cor. SW NE Sec. 20-13-21w ..... Hole full oil 3,960-72 ft.; averaging 189 bbls. daily; completed.

WASHINGTON COUNTY

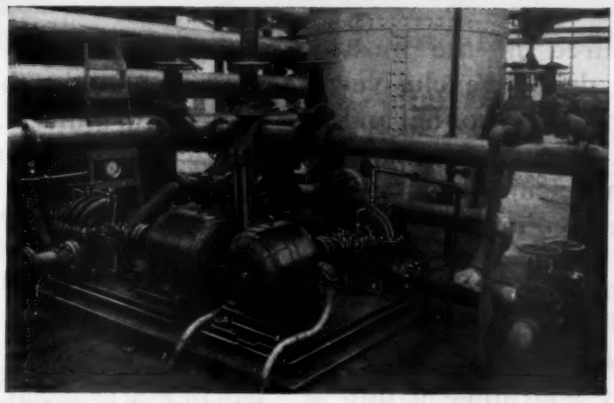
McCool & Vincent's No. 1 Linn, NW cor. NE Sec. 27-4-3 .. Drlg. 2,300 ft.

WALLACE COUNTY

Morton & Entyre's No. 1 Parker, SE cor. NW SW Sec. 20-13-41w ..... Rig.

(Continued on Next Page)

PUMPS For The OIL INDUSTRY



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NATURALINE

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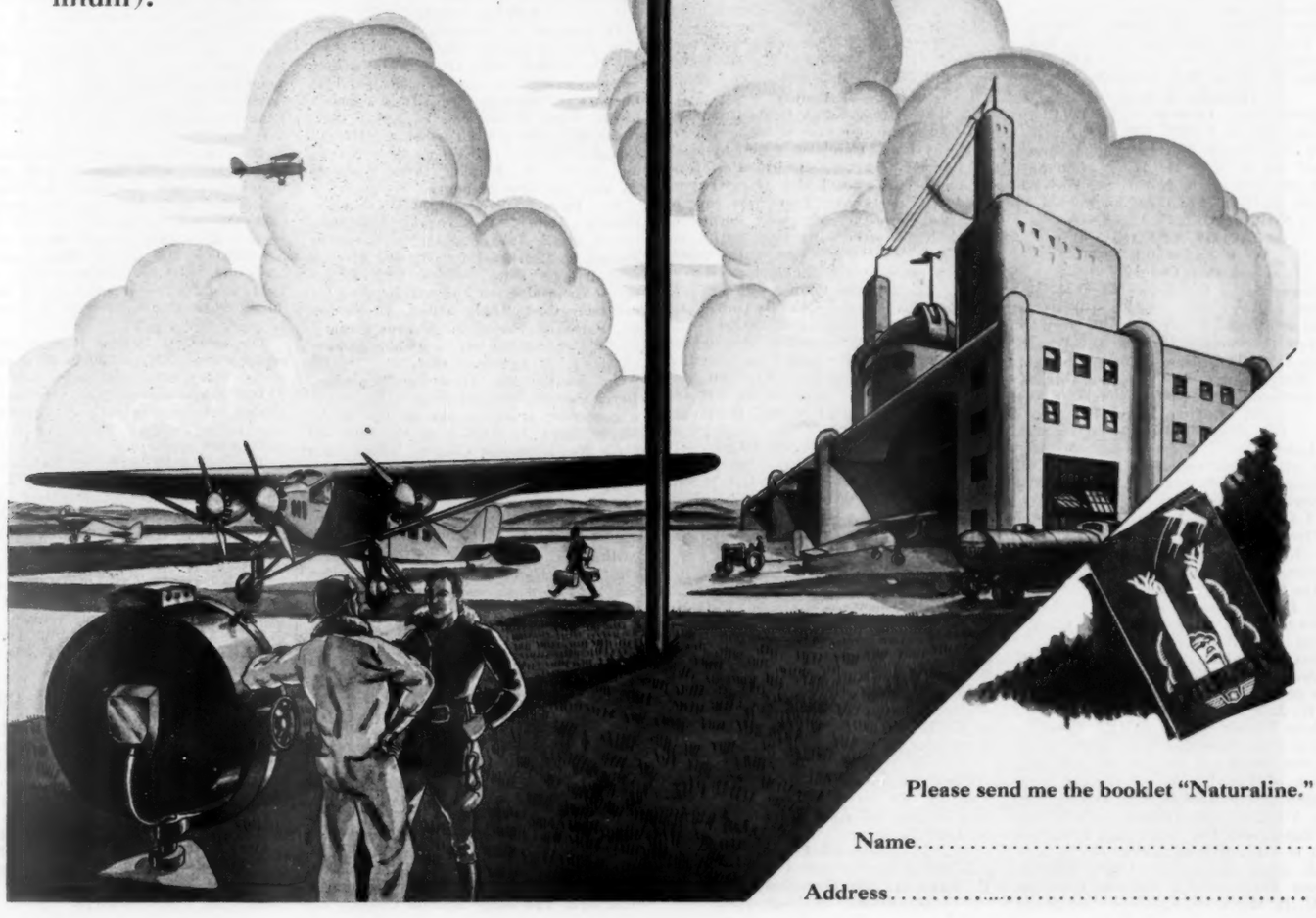

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WILDCAT OPERATIONS IN NEBRASKA

(Descriptions are East unless otherwise marked)

FRANKLIN COUNTY

U. R. Drlg. Co.'s No. 1 Brunkle (twin well), C NW SW NE Sec. 2-3n-13w .....Rig.

Northwestern's No. 1 Ingold, C NE Sec. 24-6n-28w .....Total depth 4,050 ft.; cementing cave.

FURNAS COUNTY

Southwestern Pet. Corp. of Nebraska's No. 1 Montague, SE SW SW Sec. 28-1n-22w .....Shut down 1,510 ft.

Graham Bros.' No. 1 Edwards, NW SW Sec. 13-2n-22w...Shut down 3,150 ft.

WEBSTER COUNTY

Mid-States Exploration Co.'s No. 1 Platt, C SE one-half Sec. 3-1n-11w .....Shut down 555 ft.

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE
Week Ended July 10

Gray County

Adams Oil Co.'s No. 3 J. S. Morse, 330 feet north and west of the SE cor. NE NE, Section 3, Block 26, H.&G.N. Survey. Phillips Petroleum Co.'s No. 1 E. R. Eakins (Blasdel), 330 feet north and east of the SW cor. NE NE, Section 56, Block 25, H.&G.N. Survey. The Texas Company's No. 7 A. Chapman-A, 455 feet south and 205 feet west of the northeast corner of the north 160 acres of the west 320 acres of Section 50, Block 25, H.&G.N. Survey. Same company's No. 4 M. B. Davis, 1,140 feet south and 790 feet west of the NE cor. NW, Section 8, Block 1, A.C.H.&B. Survey. Same company's No. 5 M. B. Davis, 330 feet south and 990 feet east of the NW cor., Section 8, Block 1, A.C.H.&B. Survey. P. A. Tharp's No. 1 B. E. Finley, 3,416 feet north and 330 feet east of the southwest corner of B. F. Chaney Survey. Herrogan Oil Co.'s No. 1 C. W. Bradford, 330 feet south and 990 feet west of the NE cor. N half NE, Section 123, Block B-2, H.&G.N. Survey. Operators Oil Co.'s No. 4 Cook-Faulkner, 990 feet south and 330 feet east of the northwest corner of the west 90 acres of Section 30, Block B-2, H.&G.N. Survey. Phillips Petroleum Co.'s No. 5 J. H. Palmer, 990 feet south and 330 feet west of the northeast corner of the east 83 acres of Section 31, Block B-2, H.&G.N. Survey. The Texas Company's No. 3 Bruce Bull, 330 feet south and east of the NW cor., Section 2, Block B-2, H.&G.N. Survey.

Wheeler County

Upham Gas Co.'s No. 3, I. Close (Gooch), at the C SW SW, Section 81, Block 23, H.&G.N. Survey. Vaughan and others' No. 1 Mrs. M. Ackley, 330 feet south and east of the NW cor. NW NW, Section 4, Block 27, H.&G.N. Survey.

NORTH CENTRAL AND WEST TEXAS
Week Ended July 10

Archer County

Brown Farm Oil Co.'s No. 5 E. T. Brown, 450 feet north and 2,250 feet east of the southwest corner of E. T. Brown's 320-acre tract out of Section 2, S.P.R.R. Survey, A-921. George O. Pace and others' No. 1 Nora Mankins and others, 510 feet south and 490 feet west of the NE cor. SE, Section 1, S.P.R.R. Survey, A-427. Shappell Oil Co.'s No. 8 J. D. Lyles, 750 feet north and 50 feet west of the SE cor. NE NW, Section 7, Hooper & Wade Survey, A-234. United Producing and Petroleum Producing Co.s' No. 1 L. F. Wilson-J, 631 feet north and 750 feet east of the southwest corner of Lot No. 7, Wilson's Geraldine Subdivision. F. P. Cullum and Prairie Oil & Gas Co.'s No. 1 Falls County School land, 150 feet north and 250 feet east of the SW cor., Section 17, Falls County School land, A-130.

Estacado Oil Co. and others' No. 3 H. O. Prideaux, 750 feet north and 150 feet west of the southeast corner of Lot No. 24, W. J. Fraley Subdivision, and located in John Dorsey Survey, A-122. Estacado Oil Co. and others' No. 4 H. O. Prideaux, 450 feet north and west of the southeast corner of Lot 24, W. J. Fraley Subdivision, and located in John Dorsey Survey, A-122. C. W. Gilliland's No. 5 G. H. Roach, 450 feet south and 1,050 feet west of the northeast corner of the west 265.5 acres of Section 1,595, T.E.&L. Survey. Humble Oil & Refining Co.'s No. 21 G. B. Hamilton, 3,313 feet north and 450 feet west of the SE cor. W half, Section 1, Crawford Subdivision. Magnolia Petroleum Co.'s No. 1 W. H. Portwood, 150 feet south and west of the NE cor. SE, Section 2,411, T.E.&L. Survey. Petroleum Production Co. and others' No. 6 A. M. Kunkel-B, 150 feet south and 1,350 feet west of the northeast corner of their 40-acre lease out of Section 3, B.B.B.&C. Survey, A-51. Same company's No. 7 A. M. Kunkel-B, 150 feet north and 1,181 feet west of the southeast corner of their 40-acre lease out of Section 3, B.B.B.&C. Survey, A-51. Prairie Oil & Gas Co.'s No. 28 Richardson-B, 150 feet south and 1,350 feet east of the northwest corner of their lease out of Section 1, South Anderson Subdivision. Roy Rogers and others' No. 1 C. R., C. K., and E. G. Garvey, 450 feet south and 150 feet east of the northwest corner of the west 80 acres of the south 161 acres of Section 1,859, T.E.& L. Survey. Wise & Jackson's No. 1 J. M. Inman and others, 150 feet south and east of the southeast corner of C. E. Pruett's 234-acre tract out of Thomas Toby Survey, A-645, and located in Sarah McKimb Survey, A-493, being 150 feet south and 642 feet east of the northwest corner of their 51.6-acre lease.

Borden County

Moncrief and others' No. 1 S. I. Munger, 1,320 feet north and east of the SW cor., Section 14, Block 31, Township 4n, T.&P. Survey. Teas & Wheeler's No. 1 L. E. Long, 1,320 feet south and west of the NE cor., Section 27, Block 30, Township 5n, T.&P. Survey.

Cooke County

Faith Oil Co.'s No. 1 Louis Campbell, 150 feet north and west of the southeast corner of Louis Campbell tract out of O. F. Leverett Survey, A-607. Petroleum Production Co.'s No. 1 Mrs. Mary Gwynn, 1,044 feet north and 2,809 feet east of the most westerly southwest corner of Marshall University Survey, A-619, being 150 feet south and east of the northwest corner of their 17-acre lease.

Crane County

Church & Fields' No. 3 University-Dewell, 990 feet north and 330 feet west of the SE cor. W half SW, Section 39, Block 30, University land. Humble Oil & Refining Co.'s University-D, 330 feet north and 990 feet west of the SE cor. NW, Section 34, Block 30, University land.

Warner-Quinlan Co.'s No. 4 University (Church-Weekley), 990 feet north and 330 feet east of the SW cor. E half SW, Section 39, Block 30, University land. Warner-Quinlan's No. 5 University (Church-Weekley), 2,310 feet north and east of the SW cor., Section 39, Block 30, University land.

Foard County

Shell Petroleum Corp. and Fain-McGaha Oil Corp.'s No. 1 T. A. Johnson, 150 feet north and west of the southeast corner of T. A. Johnson Survey. Wichtex Oil Co. and others' No. 1 T. A. Johnson, 150 feet north and west of the southeast corner of the south 40 acres of T. A. Johnson's 109.5-acre tract out of Section 44, Block 18, H.&T.C. Survey.

Garza County

Thompson and others' No. 1 Floyd Tuffing, 330 feet north and 2,310 feet west of the SE cor., Section 10, Block 6, H.&G.N. Survey.

Glasscock County

Midwest Exploration Co.'s No. 1 W. P. Edwards, 230 feet north and 2,250

(Continued on Page 158)

EASTERN FIELDS

(Continued from Page 80)

Township, Guernsey County, J. W. Watson and others have completed a duster in the Niagara lime on the Robert McMurray farm. On Dans Run, Section 35, Newport Township, Washington County, the Parsons & Sweeney Oil Co. completed in the Peeker sand No. 4 on the Isaac E. Mendenhall heirs' farm. It is a 4-bbl. pumper.

In the SW of Section 15, Perry Township, Muskingum County, the Wittmer Oil & Gas Properties has completed in the Clinton sand a duster on the S. C. Spring farm. In Section 10, Fallsbury Township, Licking County, the Preston Oil Co. completed and shot in the Clinton sand a test on the William Ashcraft farm. It produced 15 bbls. the first 24 hours.

Washington County

In Grandview Township, Washington County, Owen Blair and others have completed in the Big Injun sand a test on the David Hall farm. It is a very light pumper. In Ludlow Township, Homer Newhart has a 2-bbl. pumper in the Berea grit on the George Armstrong farm. In Section 21, Warren Township, George Wilson & Co. have a very light pumper at No. 4 on the George Wilson farm. In Section 21, same township, Buckley and others are drilling on the Cleveland Stone Co.'s property. In Lot 76, Salem Township, the Southern Oil Co.'s No. 10 on the Hall heirs' farm is a duster.

In Section 15, Perry Township, Muskingum County, Palmer & Giesinger have a gasser good for 800,000 feet on the Harry Haines farm. Recently Muskingum County shows a revival in development work. At this time there are 12 wells drilling and rigs up, all tests, drilling to the Clinton sand or Niagara lime. The next well due in the sand is the West Virginia & Pennsylvania Oil Co.'s test on the A. D. Bowden farm. The Preston Oil Co.'s test on the P. E. Arnold farm is a gasser, spraying oil at the rate of 5 bbls. a day.

Licking County

In Section 15, Bowling Green Township, Licking County, the Ohio Fuel Supply Co. drilled down from the Big lime an old gasser on the W. F. Gutridge farm to the Clinton farm. It is a gasser in the lower formation. In Lot 6, Section 16, Chatham Township, Medina County, the Oko Oil & Gas Co.'s No. 24 on the T. W. Brinker farm produced 25 bbls. the first 24 hours.

In Palmer Township, Washington County, Robert W. Turney has completed in the Peeker sand No. 5 on the Robert E. Leasure farm. It was given a shot but failed to respond with an increase in production and will be good for not more than 2 bbls. a day. In Section 23, Salsbury Township, Monroe County, C. W. Paine & Co. have a 10-bbl. pumper on the L. A. Burkhart farm.

In Section 24, Harrison Township, Perry County, Ralph Brothers, Inc., have a gasser at a second test on the M. T. Moore farm. In Section 21 the Pure Oil Co.'s No. 3 on the Charles Baker farm is a gasser in the Clinton sand. In Sections 17, 19 and 21, the Ohio Fuel Gas Co. has gassers in the same formation on the J. W. Burley, Francis Moore and James May farms. In Section 17, R. C. Miller and others have started to drill on the E. E. Heskett farm. In Section 29, York Township, Morgan County, the Leonard Oil & Gas Co. has drilled to a depth of 3,000 feet on the A. L. Giles farm and shut down. In the same township the Gas Producing Co. of Ohio has the rig completed for a second test on the B. F. Tharp farm.

Perry County

In the SE of Section 4, Harrison Township, Perry County, Crowley, Carr and others have completed in the Clinton sand a test on the B. Brumage farm. It is a gasser good for 1,500,000 feet.

At Bolin Mills, Section 3, Knox Township, Vinton County, the Co-operative Oil Co. has completed No. 4 on the Garfield Brooks farm. It is a 5-bbl. pumper in the Berea grit. In Lot 2, Section 12, Chatham Township, Medina County, the East Ohio Producing & Refining Co. has completed No. 4 on the Steve and Anna Jelenchics farm. It produced 30 bbls. the first 24 hours.

In the NW of Section 22, Elk Township, Noble County, E. J. Westerman & Co. completed in the Germantown sand No. 5 on the George Bonar farm. It is a 2-bbl. pumper. In the W half of Section 32, Stock Township, same county, the Kinner Schwallie Oil & Gas Co. completed a second test on the Frank Schwallie farm. It is a very light pumper in the Keener sand.

In the NE of Section 24, Franklin Township, Monroe County, George G. Greene has completed in the Injun sand a test on the Matthew Brown farm. It is a light pumper in the Big Injun sand. In the NW of Section 8, Fallsbury Township, Licking County, the Pure Oil Co. completed a test on the F. E. Slagaugh farm. It is a 15-bbl. pumper in the Clinton sand.

SOUTHWEST PENNSYLVANIA

On the east fork of Fishing Creek, Springhill Township, Greene County, the Manufacturers Light & Heat Co. completed No. 3 on the Susanna Ferguson farm. It is located 1,700 feet east of No. 1 on the same farm and is a gasser good for 1,000,000 feet.

In Center Township, Greene County, the Manufacturers Light & Heat Co. has completed a Fifth sand gasser on the Robert Watson farm. In Aleppo Township the same company is rigging up on the J. S. McCormick farm.

PENNSYLVANIA CRUDE ASSOCIATION MEETS

PITTSBURGH, Pa., July 13.—There is no prospect of the exhaustion of the old eastern oil fields within the next 50 to 60 years, and the oil fields of the district, instead of becoming depleted as has been rumored, actually increased in production 24 per cent last year over the production level of 1924.

This was the statement of John P. Herrick, Olean, N. Y., oil man, at the sixth annual meeting of the Pennsylvania Grade Crude Oil Association, of which he is a director, in the William Penn Hotel. More than 100 oil men attended the meeting of the association, whose membership includes most of the Pennsylvania grade crude oil producers in Pennsylvania, Ohio, New York and West Virginia.

After a wide survey of the Pennsylvania grade fields, Herrick said he had found that new methods had increased production so greatly that the peak period will not be reached for 10 to 15 years. More than 123,000 wells, producing 600,000 bbls. of oil daily, are now operating in the Pennsylvania grade fields and 10 times as much can be produced when many old wells are revived, he said.

The members, whose number has increased from 527 to 720 in the past few years, voluntarily put themselves under $1,000 bond each at the meeting as a pledge of their intention to break the practice of mixing Pennsylvania grade with other crude oils.

The following directors for the coming year were elected: Clayton G. Dorn and I. H. Shearer of Bradford; E. C. Breene, C. L. Suhr and Samuel Messer of Oil City; J. P. Flynn, Sisterville, W. Va.; E. M. Lyons, Philadelphia; John A. Beck, Karns City; Fred G. Clark, Cleveland, Ohio; J. D. Dinsmoor, St. Mary's, W. Va.; D. M. Wilson, Columbus, Ohio; A. D. Hufford, Bremen, Ohio; John P. Herrick, Olean, N. Y.; David P. McCalmont, Franklin, and H. D. Atha of Logan, Ohio.

CANADIAN GEOLOGICAL SURVEY

CHATHAM, Ontario, July 13.—Dominion government geologists under the direction of S. Evans of the Geological Survey of Canada have started work in the Grande Prairie area of northwestern Alberta, and will conduct a survey along the Smoky, Porcupine and Wapiti Rivers. Dr. G. S. Hume of the Geological Survey has started work in the Highwood district of the southern foothills west of the Waite and Turner Valleys.

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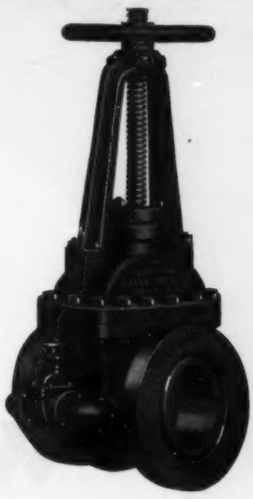

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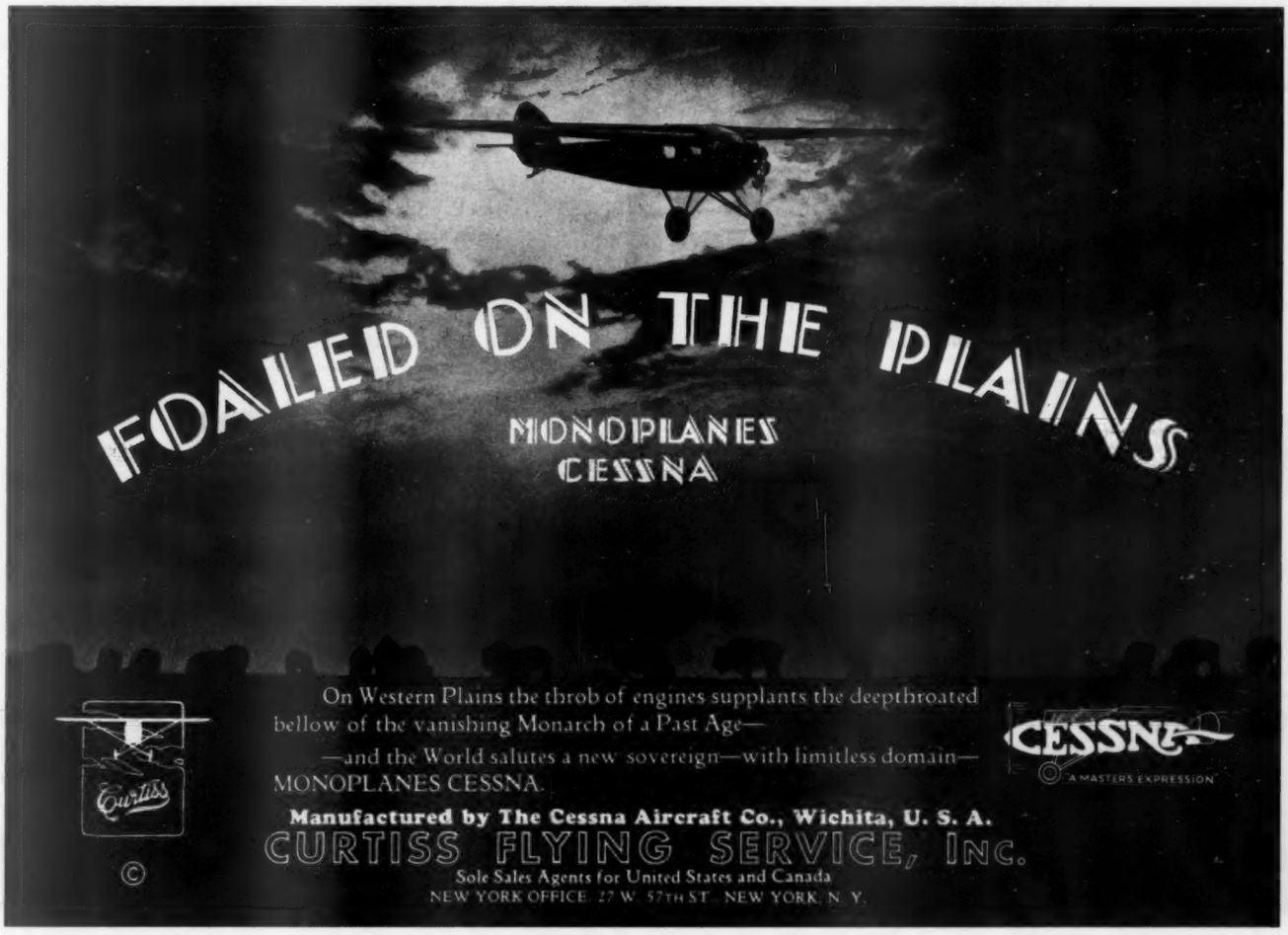
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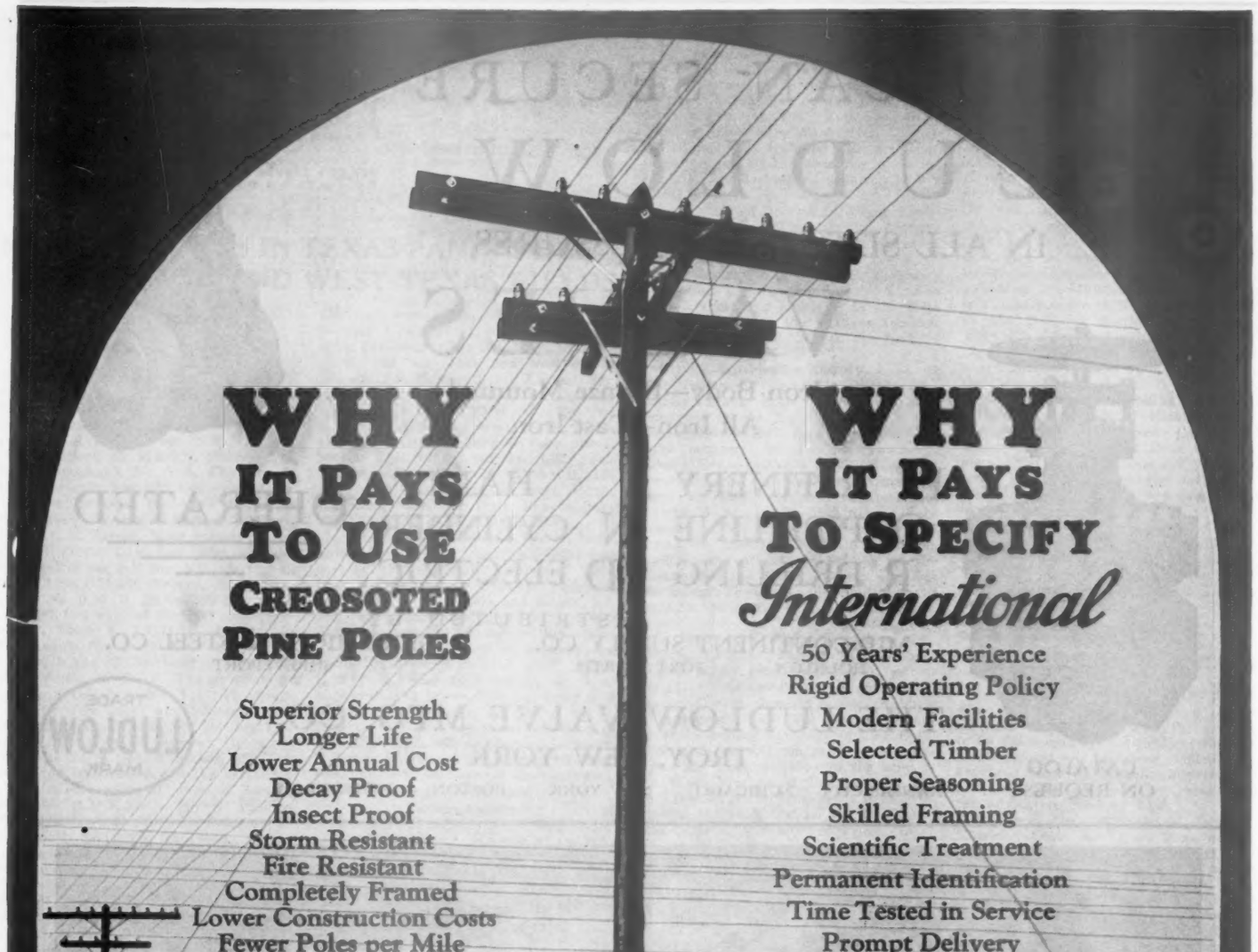
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OKLAHOMA FIELDS

(Continued from Page 51)

community test 4 miles west of the Sasakwa Pool, an important wildcat test, found water in the Simpson lime at 4,255 feet after topping the Simpson at 4,193 feet. Until the water was encountered the test was reasonably high on the upper horizons. The test will be drilled to the Wilcox sand.

The Carter Oil Co.'s No. 1 Davis, NE SE SW, Section 7-6-8, Seminole County, in the Sasakwa Pool, had a hole full of water in the Wilcox sand at 4,209-40 feet and is shut down for orders.

A new community wildcat test is to be drilled by the Gypsy Oil Co. in the NW cor. NE NE Section 23-6-4, Pottawatomie County, 4 miles east of Asher on a block of 800 acres, with the following companies holding an interest: Gypsy Oil Co., Carter Oil Co., Magnolia Petroleum Co. and Prairie Oil & Gas Co.

New Work in Beebe

New work is getting under way in the Beebe district of Pontotoc County. Benedum & Trees have made five locations on the property recently purchased from B. A. LaSalle. The same company is spudding at No. 1 Molly, SE cor. SW Section 30-5-5; same company's No. 1 Coker, SW cor. NW NW Section 31-5-5, has also spudded. Rig is up for No. 1 Lowery, NE cor. SW NE Section 31-5-5. No. 1 Matthews, NE cor. SE Section 31-5-5, is drilling at 900 feet, and No. 5 Mole, NE cor. SE NE Section 31-5-5, is rigging up. American Oil & Refining Co.'s No. 2 Robertson, C SW NE SW Section 19-5-5, is drilling in the Simpson at 2,488-98 feet, with 1,500 feet of oil in the hole. Empire Oil & Refining Co.'s No. 1 Morris, SW SE NW Section 19-5-5, is still making 350 bbls. a day from the Hunton lime at 2,362-82 feet. Independent Oil & Gas Co.'s No. 1 Davis, NE NW SW Section 19-5-5, is shut down with a hole full of water at 2,681 feet. Transcontinental Oil Co.'s No. 1 Bolen, SE SW NW Section 19-5-5, had Hunton lime at 2,157 feet and is drilling in it at 2,219 feet with nothing showing. Hoffman and others' No. 1 Tecumseh, SE cor. SW Section 24-5-5, was drilling around 2,150 feet.

St. Louis-Asher Runs

The average daily pipe line runs from the St. Louis and Asher Fields for the past week are as follows:

Company—	Bbls.
Consolidated	2,159
Cosden	677
Gulf	4,455
Independent	2,964
Magnolia	32,105
Oklahoma	1,132
Prairie	25,980
Shell	3,206
The Texas Company	461
Tidal	4,223
Sinclair	23,015
Total	100,377

Seminole Runs

The daily average pipe line runs from the Seminole Field for the past week are as follows:

Company—	Bbls.
Barnsdall	6,510
Champlin	4,373
Continental	1,521
Consolidated	326
Cosden	5,493
Empire	9,929
Gulf	25,790
Independent	none
Magnolia	24,611
Oklahoma	47,155
Prairie	55,846
Producers & Refiners	2,023
Pure	5,971
Shaffer	4,251
Shell	11,990
Sinclair	39,385
Texas	15,862
Tidal	21,007
White Oak	3,346
Total	285,389
Tank cars	7,898
Grand total	293,287

Muskogee Operations

In the Muskogee Field three wells were completed and several new locations and three tests abandoned, for the past week. The most important completion was the Rose well southeast of Taft, which was completed last week for 255 bbls. In the Boyle Pool, the Bryan Petroleum Co. completed a 20-bbl. well. Johnson and others completed a gas well estimated at 2,000,000 feet. Two new locations were made in the Boyle Pool by Babcock Brothers and E. A. Hutchinson has also made a location close to the pool. In Section 3-15-15, the Bryan Petroleum Co. completed a failure and it has been abandoned. In the Bushy Mountain area the test started by King Brothers has been abandoned at 300 feet.

131 New Locations

The Oklahoma fields showed 131 new locations for the week ending July 13. During the period 65 completions were reported, of which 39 were oil wells with an initial production of 27,952 bbls., 10 were gas wells, and 16 were dry holes. Sixty-nine of the new locations were from the greater Seminole Field.

The State's deepest well is still drilling in shale, it is the Indian Territory Illuminating Oil Co.'s No. 1 Cook, SW cor. NW, Section 10-1-11, Coal County. The test is drilling ahead at 7,675 feet. No shows have been encountered since the test was started.

Southern Oklahoma is getting a more intensive play from a geological standpoint, than has ever been attempted before in that area. More core drill, torsion balance, magnetometer and surface parties are working especially in Stephens, Kiowa and Jefferson Counties, than ever before. The Wirt Franklin Oil Co.'s No. 1, in Section 9-2s-6w, Stephens County, has a show of oil at 3,235-43 feet and is testing that horizon. Amerada Petroleum Corp.'s No. 1, in Section 36-4s-9w, Jefferson County, is drilling at 3,130 feet. It is one of the deepest tests in the county to date, and is considered a rank wildcat.

Beckham County

Martin & Kay's No. 1 Martin, C N half, Section 32-8-24w, is rigging up.

Cotton County

Moore and others' No. 2 Cobb, NW cor. SW SW NE, Section 2-2s-10w, is drilling at 400 feet. Silurian Oil Co.'s No. 7 Chambers, SE cor. NW NW, Section 2-2s-10w. C. A. Everts' No. 1 McAlester, NW cor. NE, Section 14-2s-10w, is drilling at 1,220 feet.

Silurian Oil Co.'s No. 2-P Chambers, SW cor. NE NW, Section 2-2s-10w, has been completed for 37 bbls. in sand 2,144-42 feet. Moore and others' No. 3 Chambers, CWL SE SE NW, Section 2-2s-10w, made a 40-bbl. well in sand 2,160-78 feet. Lawton Oil Corp.'s No. 2 Sanders, SE cor. NW, Section 3-2s-10w, has been completed for 1,000,000 feet of gas in sand 2,260-65 feet.

Creek County

E. H. Short and others made location for No. 1-B Asbury, NE cor. SW, Section 1-19-8. Beal & Plumb's No. 2 Walker, SE cor. NE NW, Section 26-18-9, is rigging up. H. U. Bartlett Oil Co.'s No. 1 Parks, SE cor. NW NW, Section 30-18-9, is drilling at 2,000 feet. Magnolia Petroleum Co. made location for No. 3 H. Tiger, SW cor. NW SE, Section 17-17-7 . Skelly Oil Co. has the rig on the ground for No. 1 Goodman, SW cor. Section 23-17-9. Thompson & Black's No. 4 Wilson, NW cor. SW, Section 16-17-11, is rigging up. Curtis Oil Co. has the rig up for No. 1 Sewell, NE cor. SE NE, Section 27-16-10. Shaffer Oil & Refining Co.'s No. 1 Knight, NE cor. Section 16-15-8, is cleaning out to deepen from 2,915 feet.

Garfield County

Marland Oil Co.'s No. 2 Whipple, SW cor. SE SW, Section 19-23-3w, has been completed for 7,000,000 feet of gas in sand 5,040-45 feet.

Grady County

Oklahoma Gas Utilities Corp. has the rig up for No. 15 Farwell, C SW NW, Section 26-5-8w. Meridian Gas Co.'s No. 1 Ridley, C S half SE, Section 25-4-8w, has been completed for 6,000,000 feet of gas in sand 2,151-2,263 feet.

Grant County

Sinclair Oil & Gas Co. and others made location for No. 1 Dickerson, SW cor. NW NE, Section 36-28-3w. J. V. Bailey and others' No. 1 Brewer, C SW SE Section 20-27-5w, is a cellar.

Jefferson County

Monahan & Porter made location for No. 1 Paddock, CNL NW NE, Section 35-5s-7w. Gypsy Oil Co. & Roy Johnson's No. 1 Nesmith, SW cor. NE SE, Section 2-7s-7w, has been abandoned at 1,940 feet.

Kiowa County

Cooper & Terhune's No. 2 Ditmar, SE cor. NE NW NE, Section 19-6-16w, is drilling at 389 feet. E. M. Boring's No. 1 Suhren, SE cor. NW SE NE, Section 22-6-17w, has been abandoned at 2,350 feet. Cummings and others' No. 2 Prough, SE cor. NE SE SW, Section 18-6-16w, is dry and abandoned at 495 feet. J. M. Ruhl's No. 1 Ditmar, NW cor. NE SE, Section 19-6-16w, has been abandoned at 720 feet.

Lincoln County

Blackwell Oil & Gas Co. has the rig up for No. 1 McKeown, NE cor. SW SW, Section 27-17-4.

Muskogee County

Babcock Brothers moved a machine in for No. 6 N. Barnett, SW cor. NW NE, Section 8-15-15. E. A. Hutchinson has a machine on the location for No. 1 J. Grayson, SW cor. NE NW, Section 13-15-15. E. Price and others' No. 2-A J. Howard, SW cor. NW NW NW, Section 29-15-16, is rigging up. B. B. Rose has a machine on the location for No. 11 A. Howard, SE cor. NE NE, Section 30-15-16. Sioux Oil Co.'s No. 1 Martin, NW cor. SE, Section 21-11-19, is rigging.

Bryan Petroleum Co.'s No. 3 Simmons, C NW SW, Section 3-15-15, has been abandoned at 1,673 feet. No. 5 N. Barnett, CWL SE NE, Section 8-15-15, made a 20-bbl. well in Wilcox sand 1,620-29 feet. Beu & Hill's No. 1-A J. Jackson, SE cor. NW SE, Section 9-15-15, is dry and abandoned at 1,801 feet. Traders Petroleum Co.'s No. 1-A J. Howard, CWL NE NW, Section 29-15-16, is dry and abandoned at 1,283 feet. R. B. Rose's No. 10 A. Howard, SE cor. NE NE NE, Section 30-15-16, was completed for 225 bbls. in sand 1,207-16 feet. J. L. Slusher's No. 1 Nash, CNL NW SW, Section 20-15-20, is a dry hole at 775 feet.

Noble County

Magnolia Petroleum Co. has rig timbers on the location for No. 1 Young, NE cor. NW NW, Section 22-21-2w.

Okfuskee County

The Prairie Oil & Gas Co.' and T. B. Slick's No. 1 Wolf, SW cor. NW Section 18-12-10, is a cellar.

McMahon and J. Carey's rig is up for No. 2 Foster, NW cor. NE NE, Section 32-12-10. Mid-Continent Petroleum Corp. made location for No. 2 D. Diney "C," SW cor. SE NE, Section 31-11-11. Minnehoma Oil Co. moved the rig in for No. 2 Grayson, NW cor. SE, Section 31-11-11.

Barnsdall Oil Co.'s No. 1 Soweka, NE cor. SW, Section 29-12-7, is dry and abandoned at 4,855 feet. Magnolia Petroleum Co.'s No. 1 Tiger, NW cor. NE, Section 25-11-10, is dry and abandoned at 3,225 feet. Minnehoma Oil & Gas Co.'s No. 1 Grayson, NE cor. NW SE, Section 31-11-11, has been completed for 185 bbls. in sand 3,030-34 feet.

Okmulgee County

Nicholson Corp.'s No. 3 McIntosh, NE cor. Section 14-11-13, is shut down at 2,467 feet. Mechlin & Berlin's No. 8 V. Colbert, CEL SE NE, Section 14-14-14, has been completed for 32 bbls. in sand 1,065-80 feet. B. Morgan's No. 1 Fisher, SE cor. SW, Section 12-11-13, was completed for 500,000 feet of gas in sand 1,229-59 feet.

Osage County

Jennings Oil Co. made location for No. 1 NW cor. SW Section 32-29-13. Indian Territory Illuminating Oil Co. made location for No. 411, SE cor. NW NW Section 1-28-10. Peters Petroleum Co. and Producers & Refiners Corp. staked location for No. 2 NE cor. SE SW, Section 22-27-11. The rig is being moved in for No. 3 SW cor. NW, Section 11-26-8. Peters Petroleum Co.'s No. 7 CSL NW, Section 32-24-9 is drilling at 400 feet. Ray Branstetter and others made location for No. 1-A SE cor. SW, Section 23-23-10. Indian Territory Illuminating Oil Co.'s No. 259 SE cor. NW NW, Section 36-23-10, an old well, is drilling deeper at 1,892 feet. Fisher and others' No. 2 Pinkstaff, NW cor. SE, Section 16-21-7, is drilling at 200 feet. White Eagle Oil & Refining Co. made location for No. 1 SW cor. NE SW, Section 28-21-11.

Peters Petroleum Co. and others' No. 11, NE cor. SW NW Section 17-27-6, has been completed for 10 bbls. in sand 2,923-76 feet. Peters Petroleum Co. and Producers & Refiners Corp.'s No. 2, NW cor. NE, Section 27-27-11, made 55 bbls. in Bartlesville sand, 1,636-55 feet. Wrightsman Petroleum Co.'s No. 1, SE

RECAPITULATION SHEET JULY 11, 1929

Company	Little River	Carr	Maud	Mission	Bowlegs	Earlsboro	Seminole	East Seminole	Searight	Total
Amerada	1,090	....	2,686	1,020	750	1,232	838	....	655	8,270
Atlantic	....	....	....	....	895	105	420	....	....	1,420
Barnsdall	1,666	2,470	....	....	326	6,112	1,134	23	31	11,762
Blackwell	2,070	....	....	....	....	....	....	....	....	2,070
Bryan-Emery & Carter	13	....	....	....	....	....	....	....	....	13
Burke-Greis	....	....	....	....	....	2,065	....	....	....	2,065
Carter	8,980	1,255	....	1,700	3,303	2,927	6,977	....	4,561	29,703
Champlin	874	....	....	....	....	....	....	....	....	874
Continental	1,617	....	....	....	....	632	....	1,622	....	3,871
Cosden & Co.	....	....	....	....	....	2,564	....	....	....	2,564
Darby	....	....	7	....	....	....	....	....	....	7
Dixie	....	....	....	....	40	....	....	....	....	40
Empire	828	4,558	848	....	385	1,564	340	....	....	8,513
Gypsy	12,413	1,465	937	11,477	2,172	12,167	2,449	....	190	43,279
Independent	6,038	....	225	3,077	....	1,613	1,792	....	....	12,745
I. T. I. O.	2,935	6	97	....	7,550	....	2,532	....	....	13,120
King.-Shell	....	....	....	....	....	....	418	....	....	418
Laurel	....	....	265	....	....	....	....	....	....	265
Magnolia	852	1,106	189	....	1,650	22,523	160	10	816	27,306
Marland	....	....	....	1,145	....	....	....	824	....	1,969
Marland-Shaffer	71	....	....	....	....	....	....	....	....	71
Marland-Shell	....	....	66	....	....	....	....	....	....	66
McCullough	1	....	....	....	98	....	....	....	....	99
McMahon	....	....	....	875	....	....	....	....	....	875
Mid-Cont.	9,270	....	40	140	771	3,300	645	....	1,585	15,751
Mid-Kansas	....	....	....	....	....	30	....	....	....	30
Minnehoma	....	....	....	714	6	....	....	....	....	720
Pine	1,708	....	405	832	....	....	....	....	14	2,959
Pine-Phillips	68	....	....	....	....	....	....	....	....	68
Phillips	....	....	336	....	....	20	45	....	....	401
Papoose	....	....	....	....	....	....	....	....	494	494
Prairie	7,661	2,255	175	2,450	4,230	10,185	4,721	290	93	32,040
Prairie-Slick	1,195	....	....	10	....	....	....	....	....	1,805
Pure	4,490	....	1,764	....	4,990	....	5,737	....	759	17,740
Reiter-Foster	617	....	....	....	....	....	....	....	....	617
Shaffer	163	....	....	1,405	455	165	....	15	....	2,203
Shell	2,081	....	....	....	27	1,081	238	....	185	3,612
Shell-Marland	....	....	....	1,415	....	....	....	....	....	1,415
Shell-Papoose	....	....	....	1,380	....	....	....	....	....	1,380
Sinclair	5,935	1,081	1,042	1,300	4,511	3,005	2,192	2,546	1,355	22,967
Skelly	1,585	....	292	....	....	2,371	....	....	....	4,248
Skelly-Atlantic	....	....	....	....	....	1,751	....	....	....	1,751
Snowden-McSweeney	470	....	....	....	....	....	....	....	....	470
Superior	3	....	....	....	....	2,437	107	....	....	2,547
Texas	1,089	....	310	....	600	1,330	65	....	17	3,411
Texas-Indep.	1,930	....	....	....	....	....	....	....	....	1,930
Tidal	398	....	245	1,750	1,135	3,320	1,952	....	....	8,800
Turman	....	....	....	....	....	....	1,499	....	....	1,499
Twin State	60	....	150	3,025	....	90	....	....	125	3,450
Wilcox	....	....	1,927	....	....	....	....	....	194	2,121
Total prod...	78,766	14,196	12,000	33,715	33,894	82,598	34,261	5,330	11,054	305,814
Total wells..	345	50	122	115	306	306	273	16	79	1,606

cor. NW, Section 13-26-7, is dry and abandoned in Wilcox sand, 2,876-2,934 feet. Peters Petroleum Co. and Producers & Refiners Corp.'s No. 2, SW cor. SE NW, Section 11-26-8, made 7 bbls. at 1,825 feet after plugging back from 2,208 feet. Silurian Oil Co.'s No. 55 SW cor. NE NW, Section 17-32-12, is a 50-bbl. well in Bartlesville sand 1,489-1,549 feet. Clint Moore estate and others' No. 2, SW cor. NW NE, Section 16-21-9, made 8 bbls. in Bartlesville sand 2,290-2,326 feet. Mid-Continent Petroleum Corp.'s No. 1, NW cor. SE, Section 34-20-10, was drilled to 2,736 feet and plugged back to 2,215 feet where it pumped 15 bbls.

Pawnee County

Capitol Hill Oil Co.'s No. 1-A Green, NE cor. SE, Section 25-21-8, is rigging up. Martin and others' No. 5 Cotton, NW cor. NE SW, Section 6-20-8, an old well, is rigging up to deepen from 2,250 feet. Swift and others' No. 4 Smeltzer, SE cor. NW, Section 35-20-9, has been completed for 225 bbls. in sand 1,936-99 feet. John Byrne's No. 4 Edmiston, NE cor. NW NW, Section 31-21-9, made a 10-bbl. well in Layton sand 1,097-1,134 feet.

Stephens County

Beaver Oil Co.'s No. 2 Funk, CNL NE NW, Section 30-1-8w, is rigging up. Pace and others' No. 7 McMasters, SE cor. NW SE NE, Section 13-2s-8w, is abandoned at 2,301 feet. Ven Mex and and Mid-Continent Petroleum Co.'s No. 1 Woodward, NE cor. SE NE NE, Section 14-2s-8w, is rigging up.

Four In One Oil Co.'s No. 1 Funk, SW cor. SE SW, Section 19-1-8w, is dry and abandoned at 2,301 feet. Van Mex and Mid-Continent Petroleum Corp.'s No. 1-B Bush, C SW NW, Section 3-2s-8w, is pumping 12 bbls. from sand 1,647-48 feet. Pace and others' No. 5 McMasters, NE cor. NW NE, Section 13-2s-8w, has been completed for 50 bbls. in sand 1,462-70 feet.

Tulsa County

White Eagle Oil Co. made location for No. 1 Page, SE cor. SW NE, Section 2-19-11. Operators Oil Co.'s No. 1 Leverett, C SW Section 4-19-11, is drilling at 300 feet.

Wagoner County

Creekmore and others moved a machine in for No. 11 Tiger, CSL NW SW, Section 21-18-16. C. F. Finefield has a machine on the location for No. 7 Vann, C W half NE SW, Section 22-16-19.

J. E. Martin and others' No. 2 Drew, NE cor. SE SW, Section 26-18-15, made 20 bbls. in sand 988-1,003 feet. Frigel & Barth's No. 3 Henry, NE cor. SW, Section 29-18-15, is a dry hole at 1,248 feet. Perry & Hartman's No. 1-A Bruner, CEL SW SE, Section 19-17-16, has been abandoned at 1,090 feet.

Carter County

Magnolia Petroleum Co.'s No. 3 E. Hanson, SE cor. NE NW, Section 12-1s-4w, is making 130 bbls. from 3,474 feet. No. 7 E. Hefner, SE cor. SW SW, Section 33-1s-3w, has been completed for 31 bbls. in sands 3,420-4,085 feet.

Hughes County

Sinclair Oil & Gas Co. has the rig on the ground for No. 1 Tiger "B," SW cor. SE, Section 5-6-8. Yarnell Drilling Co.'s No. 1 Scott, SW cor. NE, Section 15-9-10, is dry and abandoned at 2,827 feet. Harris & Hayes' No. 1 Grayson, C SW SW, Section 18-9-10, has been abandoned at 3,347 feet. Westheimer & Daube's No. 10 Wade, NW cor. SW SE, Section 19-5-8 Allen Pool, is dry and abandoned at 4,355 feet in Wilcox sand.

The Prairie Oil & Gas Co. and T. B. Slick's No. 1 Deer, SW cor. NW, Section 4-8-9, has been abandoned at 3,540 feet.

Oklahoma County

Mid-Kansas Oil & Gas Co.'s No. 2 Fortson, C NW NE, Section 24-11-3w, Oklahoma City Pool, flowed 6,735 bbls. from Siliceous lime 6,371-6,449 feet.

T. B. Slick's No. 1 Martin, C NW NW, Section 13-13-1w, is spudding.

Pontotoc County

Homaokla Oil Co. moved a machine to the location for No. 1 Shields, NW cor. SE NW, Section 33-5-8. Indian Territory Illuminating Oil Co. made a location for No. 1 Shoate, NE cor. SE, Section 1-4-4.

La Salle Oil Co.'s No. 1 Hatcher, NW cor. SE, Section 28-5-5, is dry and abandoned at 2,471 feet in Sylvan shale. Homaokla Oil Co.'s No. 3 Ritchie, C N half SE, Section 1-4-7, has been completed for 2,000,000 feet of gas in sand 2,027-37 feet.

Pottawatomie County

J. S. Graham has the cellar dug for No. 1 Townsite, Lot 1, Block 9, NW cor. SW NW, Section 8-9-5, Earlsboro Pool. Keister & Manning made location for No. 1 Tibbes, NE cor. SW, Section 9-8-4. Wofford Drilling Co. is building the rig for No. 1 Green, SW cor. Section 28-8-5. Darby Petroleum Co. and Atlantic Oil Producing Co.'s No. 1 Cardwell, SW cor. NW, Section 15-7-4 Pearson Field, is rigging up. Minnehoma Oil Co. is building the rig for No. 3 Simms, NE cor. SE Section 16-7-4, Pearson-St. Louis Pool.

Wilcox Oil & Gas Co.'s No. 5 Smith, SE cor. NW SE, Section 8-8-5, swabbed 180 bbls. in sand 4,067-68 feet. Martin & Irwin and others' No. 2 Kelly, NE cor. Section 2-7-4, flowed 3,255 bbls. from Hunton lime 3,792-3,861 feet. Gypsy Oil Co.'s No. 4 Rosemand, NW cor. NE, Section 26-7-4, made 102 bbls. on the pump from Wilcox sand, 4,207-14 feet. Gypsy Oil Co.'s No. 2 Blandin, NW cor. NE Section 31-7-5, St. Louis Field, is dry and abandoned at 4,434 feet in Wilcox sand. McCulloch Oil Co. and Carter Oil Co.'s No. 1 McDowell, NW cor. SE SW Section 28-6-4, Asher area, has been abandoned at 4,091 feet in Wilcox sand. The Prairie Oil & Gas Co.'s No. 1 Bebee, NW cor. SE SE, Section 19-6-4 Asher Pool, has been abandoned at 4,124 feet in Wilcox sand.

The Prairie Oil & Gas Co.'s No. 1 Lynn, SW cor. NE NW, Section 20-6-4 Asher Pool, has been abandoned at 4,003 feet. No. 2 Lynn, NW cor. SE NW, Section 20-6-4, is a dry hole at 4,051 feet in Wilcox sand.

Seminole County

Carter Oil Co. made location for No. 1 Z. Cox, SE cor. SW SE, Section 31-10-6, Earlsboro Pool. Shell Petroleum Corp. has the cellar dug for No. 2 Crump, NE cor. SW, Section 32-10-6. Minnehoma Oil Co. moved the rig in for No. 1 Nice, cor. SW, cor. NW NW, Section 17-9-6. Magnolia Petroleum Co. is building the rig for No. 8 A. Anderson, NE cor. SW NE, Section 18-9-6. No. 9 A. Anderson, NW cor. SE NE, Section 18-9-6, is rigging up. The rig is under construction for No. 3 D. W. Anderson, SE cor. NW SE, Section 18-9-6. No. 4 D. W. Anderson, SW cor. NW SE, Section 18-9-6, is also a rig going up.

The rig is on the ground for No. 1 Panos, SW cor. NE NE, Section 18-9-6. Location has been made for No. 2 Panos, SW cor. NE NE, Section 18-9-6. Barnsdall Oil Co. has the cellar dug for No. 2 Noble, NE cor. SE SW, Section 18-9-6. Gypsy Oil Co.'s No. 2 Noble, SE cor. NW NE, Section 18-9-6, is a cellar. Gypsy Oil Co. and Devonian Oil Co.'s No. 3 S. Payne, SW cor. NE SE, Section 18-9-6, is a cellar. The rig is on the ground for No. 4 S. Payne, NE cor. SW SE, Section 18-9-6. No. 5 S. Payne, NW cor. SW SE, Section 18-9-6, is a cellar.

Empire Oil & Refining Co. made location for No. 1 Brown, SE cor. Section 3-8-5 Carr City Pool. Sinclair Oil & Gas Co. moved the rig in for No. 5 Bean, NW cor. NE NW, Section 11-8-5. W. B. Pine has the cellar dug for No. 4 Harjo, SE cor. SW SE, Section 6-8-6 Mission Pool. Independent Oil & Gas Co. made location for No. 6 R. Davis, SW cor. Section 13-7-6, Little River Pool. No. 7 R. Davis, CEL W half SW SW, Section 13-7-6, is also a location. Gypsy Oil Co. made location for No. 11 Hulhoke, NW cor. SE SE, Section 14-7-6. Independent Oil & Gas Co. made location for No. 7 Tewee, SW cor. NE SE Section 14-7-6.

Champlin Oil & Refining Co. has the cellar dug for No. 3 Tewee, NE cor. SE NE, Section 14-7-6. Blackwell Oil & Gas Co. made location for No. 5 Talley, SE cor. SW SW, Section 14-7-6. Independent Oil & Gas Co. made location for No. 11 Harris, SE cor. NW NW, Section 23-7-6. No. 12 Harris, NE cor. NW NW, Section 23-7-6, is a location, twin to No. 8. Carter Oil Co. made a location for No. 5 J. Larney, NW cor. Section 24-7-6. Mid-Continent Petroleum Corp. has the cellar dug for No. 12 Smith, SE cor. NW SE, Section 5-7-7.

Gypsy Oil Co.'s No. 5 Payne, SE cor. NE, Section 5-7-7, is a cellar. Location has been made for No. 1 A. Walker, NE cor. SW SE, Section 5-7-7. Sinclair Oil & Gas Co. moved the rig in for No. 2 Phillips, NE cor. SE, Section 5-7-7. The rig is on the ground for No. 3 Phillips, SW cor. NE SE, Section 5-7-7. No. 4 Phillips, NW cor. SE SE, Section 5-7-7, is a cellar. Shell Petroleum Corp. made location for No. 2 Holatka, NW cor. NE SE, Section 7-6-8 Sasakwa Pool. Sinclair Oil & Gas Co. is building the rig for No. 5 I. Davis "A," NW cor. SE, Section 7-6-8.

Location has been made for No. 6 I. Davis "A," NE cor. NW SE, Section 7-6-8. The rig is being built for No. 7 I. Davis "A," NE cor. SW SE, Section 7-6-8. W. R. Ramsey made location for No. 1 Jefferson, NE cor. SW SE, Section 23-5-7. The Texas Company's No. 3 Jefferson, NW cor. SE SE, Section 23-5-7, is a cellar. Sinclair Oil & Gas Co.'s No. 1 T. Peter, SE cor. NW NW, Section 18-5-8, is rigging up to deepen from 2,700 feet. The Prairie Oil & Gas Co. made location for No. 2 Patten, NE cor. NW NE, Section 18-6-8. Location has been made for No. 1 Diament, NE cor. SE, Section 12-6-7. No. 1 Grisso, NE cor. Section 9-9-6, is a location.

Papoose Oil Co.'s No. 1 Marks, SE cor. NW, Section 32-10-6, made 562 bbls. in Cromwell sand 4,012-55 feet, total depth 4,265 feet. J. S. Cosden's No. 2 Anderson, NW cor. SW, Section 13-9-5 Earlsboro Pool, is dry and abandoned at 4,265 feet in Wilcox sand. Gypsy Oil Co. and Devonian Oil Co.'s No. 1 S. Payne, NW cor. NE SE Section 18-9-6, flowed 5,527 bbls. in Wilcox sand 4,271-78 feet. Magnolia Petroleum Co.'s No. 3 A. Anderson, SW cor. NE, Section 18-9-6, was completed for 5,888 bbls. in Wilcox sand 4,380-92 feet.

Marland Oil Co. and Sinclair Oil & Gas Co.'s No. 1 Perry, NW cor. NE SW Section 18-9-7, made 657 bbls. in Wilcox sand 4,300-10 feet. The Prairie Oil & Gas Co.'s No. 1 Harris, NW cor. SE Section 4-9-7, has been abandoned at 4,175 feet. Sinclair Oil & Gas Co.'s No. 1 B. Coody, SW cor. NE, Section 18-9-7 East Seminole Pool, flowed 1,605 bbls. in Wilcox sand 4,240-55 feet. Gypsy Oil Co.'s No. 1 C. Coker, SE cor. SW SW, Section 2-8-5 Mission Pool, has been completed for 1,662 bbls. in Wilcox sand 4,256-65 feet. Shaffer Oil & Refining Co.'s No. 2 Weaver, SW cor. NE NE, Section 12-8-5, is dry and abandoned at 4,465 feet. The Prairie Oil & Gas Co.'s No. 12 Billington, SW cor. NW SW, Section 11-8-5 Carr City Pool, made 340 bbls. in Wilcox sand 4,165-73 feet.

Gypsy Oil Co.'s No. 12 Cotcha, NW cor. NE SW, Section 23-7-6 Little River Pool, made 1,090 bbls. in Gilcrease sand 3,110-48 feet. Independent Oil & Gas Co.'s No. 9 Harris, SW cor. SE NW, Section 23-7-6, was completed for 1,100 bbls. in Gilcrease sand 3,264-74 feet. The Texas Company's No. 5 D. Hotulke, SE cor. SW NW, Section 23-7-6, swabbed 800 bbls. from Gilcrease sand 3,147-62 feet. Independent Oil & Gas Co.'s No. 2 Reed, NW cor. NE NW, Section 26-7-6, has been completed for 20,000,000 feet of gas in Gilcrease sand 3,142-3,217 feet.

Magnolia Petroleum Co.'s No. 1 Wood, SE cor. Section 28-7-6, is dry and abandoned at 3,360 feet. Shaffer Oil & Refining Co.'s No. 1 McCan, NE cor. Section 33-7-6, pumped 55 bbls. from sand at 2,810 feet after plugging back from 3,338 feet in Cromwell sand. Empire Oil & Refining Co.'s No. 2 Fish, NE cor. SE, Section 19-7-8, has been shut in for 2,500,000 feet of gas in sand 2,835-49 feet.

Carter Oil Co.'s No. 1 F. Fish, SW cor. NW, Section 20-7-8, has been completed for 2,500,000 feet of gas in sand 2,868-79 feet. McCulloch Oil Co.'s No. 1 Powell, NW cor. Section 11-6-5, has been abandoned at 4,552 feet in Wilcox sand. The Texas Company's No. 1 Fleet, SE cor. Section 15-5-7, is dry and abandoned at 4,616 feet in Wilcox sand. Sunray Oil Co. and Cal Cul Oil Co.'s No. 2 Joanna, SW cor. NW SW, Section 24-5-7, southwest of Allen Pool, is a dry hole at 4,450 feet. Sinclair Oil & Gas Co.'s No. 2 Peter, NE cor. NW NW, Section 18-5-8 Allen Pool, made a 50-bbl. well in sand at 2,360 feet.

Production of Seminole Area

Production of pools in the Seminole area by companies and leases for July 11 follows:

Little River Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Nitey	2-7-6	3	396
Amerada-Wilcox:			
Fore	35-8-6	2	700
Barnsdall:			
Cotcha	23-7-6	2	675
Hotulke	22-7-6	3	980
Walker	4-7-6	1	11
Blackwell:			
Baker	11-7-6	4	1,065
Nitey	35-8-6	5	255
Talley	14-7-6	4	750
Bryan & Emery:			
Walker	4-7-6	1	13
Carter:			
Cotcha, M.	23-7-6	3	90
Cudjo, L.	23-7-6	2	280
Fish	36-8-6	4	605
Harjo, C.	11-7-6	3	2,505
Harjo, M.	13-7-6	4	710
Jackson	11-7-6	4	745
B. Larney	26-7-6	1	340
Larney	24-7-6	4	1,790
Lena	10-7-6	1	405
Moore	11-7-6	2	50
Tewee	14-7-6	6	850
Thomas	11-7-6	1	375
Wilson	12-7-6	1	235
Champlin:			
Tewee	14-7-6	2	874
Continental:			
Cosar	36-8-6	7	952
Cosar, M.	25-8-6	1	294
Continental & Fisher:			
Milsey	11-7-6	2	371
Empire:			
Charty	24-7-6	1	69
Coker	13-7-6	2	622
Cotcher	27-7-6	2	122
Sandlin	3-7-6	1	10
Gypsy:			
Brown, C	33-8-6	1	502
Brown, M.	33-8-6	1	892
Campbell	36-8-6	2	5
Conard	22-7-6	2	60
Cosar, W.	36-8-6	2	205
Cotcha	23-7-6	11	4,172
Denmark	11-7-6	3	1,248
Hulhoke	14-7-6	10	1,592
Mungee	1-7-6	1	0
Payne	5-7-7	3	3,282
Pottie	35-8-6	4	285
Renton	11-7-6	3	170
Independent:			
Carpenter	27-7-6	3	701
Davis, R.	13-7-6	4	1,150
Tewee	14-7-6	6	1,025
Reed	26-7-6	1	50
Williams	15-7-6	1	545
Independent & Highway:			
Harris	23-7-6	9	2,067
Independent & White Eagle:			
Davis	2-7-6	4	500
I. T. I. O.:			
Campbell	1-7-6	1	154
Dungan	35-8-6	3	547
House, M. A.	1-7-6	1	19
House, W. E.	1-7-6	1	22
House, "B"	2-7-6	4	641
Hull	26-8-6	3	134
Jackson	1-7-6	3	371
McCulla	1-7-6	3	646
Nitey	2-7-6	5	107
Phoebe "A"	36-8-6	2	27
Phoebe "B"	36-8-6	3	0
Reed	1-7-6	1	3
Soketche	1-7-6	3	264
Magnolia:			
Cruse	2-7-6	4	72
Denby	11-7-6	4	72
Harjo, A.	14-7-6	2	80
Harjo, B.	14-7-6	2	176
Pottie	35-8-6	4	32
Reed, E.	31-8-7	1	40
Reed, I.	22-7-6	3	380
Marland & Shaeffer:			
Harrison	4-7-7	1	71
McCulloch & Sands:			
Harrison	4-7-6	1	1
Mid-Continent:			
Bruner	11-7-6	4	110
Eleck	23-7-6	1	0
Smith	5-7-7	7	9,000
Wadsworth	36-8-6	4	160
W. B. Pine:			
Hoyecha	26-8-6	7	1,708
Pine-Phillips:			
Pottie	35-8-6	1	68
Prairie:			
Chilcoat	25-8-6	3	640
Coker	1-7-6	2	729
Gibson	14-7-6	5	1,140
Harris	14-7-6	4	685
House	2-7-6	4	130
Johnson	24-7-6	2	1,170
Lustey	5-7-7	2	40
Moppin	24-7-6	2	280
Reed	13-7-6	2	805
Talley	14-7-6	4	645
Thomas	5-7-7	1	0
Williams	15-7-6	2	342
Wood	26-7-6	3	285
Slick:			
Cudjo	26-7-6	4	975
Prairie & Amerada:			
Sunny	14-7-6	5	770

Company, farm—	Location	Wells	Prod.
Prairie & Slick:			
Carr	9-7-7	1	820
Pure:			
Brinson	24-7-6	3	1,267
Colcha	14-7-6	10	2,011
Harjo	11-7-6	4	1,212
Hollins	11-7-6	1	0
Reiter-Foster:			
Bunyard	14-7-6	4	605
Jefferson	31-7-6	1	12
Shaffer:			
McCann	32-7-6	1	38
Shaeffer:			
Narcombe	36-8-6	2	125
Shell:			
Caesar	11-7-6	1	59
Glass	26-7-6	1	0
Hotulke	23-7-6	4	735
Johnson	13-7-6	4	1,287
Sinclair:			
Blanton	11-7-6	1	325
Cosar	30-8-6	3	920
Haney	12-7-6	1	90
Tewee	14-7-6	2	1,505
Phillips	5-7-7	1	2,925
Sinclair & Kingwood:			
Pompey	24-7-6	1	170
Skelly:			
Carl	14-7-6	2	1,585
Snowden-McSweeney:			
Tiger	13-7-6	2	470
Superior:			
Potulka	31-8-6	1	3
Texas:			
Brooks	25-8-6	1	12
Coker	1-7-6	3	2
Janey	11-7-6	6	1,075
Texas & Independent:			
Hutulke	23-7-6	5	1,250
Hutulke	22-7-6	3	680
Tidal:			
House	1-7-6	2	390
Johnson	1-7-6	1	8
Twin State:			
Lowe	25-8-6	1	60
Total		345	78,766

Carr City

Barnsdall:			
Coker	11-8-5	9	2,224
Fife	14-8-5	3	247
Carter:			
Coker	2-8-5	2	1255
Empire:			
Cluck	11-8-5	11	4,558
Gypsy:			
Coker	10-8-5	1	25
Coker	2-8-5	1	1,425
Fife	14-8-5	1	15
I. T. I. O.:			
Simpson	10-8-5	1	6
Tully	10-8-5	1	0
Magnolia:			
Fee	11-8-5	3	1,100
Killingsworth	14-8-5	1	6
Prairie:			
Billington	11-8-5	10	2,085
Mitchell	15-8-5	1	170
Sinclair:			
Bear	11-8-5	3	397
Harjo	11-8-5	3	684
Total		50	14,196

Maud Pool

Amerada:			
Ballard	1-8-4	1	65
Fehlig	7-8-5	1	65
Gossland	8-8-5	3	190
Gravel	1-8-4	1	15
Hallum	1-8-4	4	1,920
Amerada & Barnsdall:			
Wallace	17-8-5	3	250
Amerada & Hull:			
Green	20-8-5	3	180
Darby:			
Ketcham	19-8-5	1	7
Empire:			
Smith	8-8-5	1	843
Gypsy:			
Bourassa	7-8-5	4	67
Miller	18-8-5	8	870
Independent:			
Harding	18-8-5	5	225
I. T. I. O.:			
State	16-8-5	1	97
Laurel O. & G.:			
Billington	18-8-5	3	265
Magnolia:			
Billington	8-8-5	4	32
Green	20-8-5	3	157
Marland & Shell:			
Everett	18-8-5	2	66
Mid-Continent:			
Shelton	18-8-5	3	40
Phillips:			
Hudson	19-8-5	4	236
Wallace	17-8-5	2	100
Pine:			
Lingefelt	18-8-5	2	45
Smith	8-8-5	1	360
Prairie:			
Campbell	18-8-5	8	160
Prairie & White Eagle:			
Villines	20-8-5	1	15
Pure:			
Lindly	18-8-5	8	355
Urbansky	19-8-5	2	82
Wiley	8-8-5	4	1,327
Sinclair:			
Bellars	19-8-5	10	685
Calvin	7-8-5	3	287
Lewis	6-8-5	2	70
Skelly & Lenox:			
Green	20-8-5	1	105
Skelly & Margay:			
Lingefelt	18-8-5	4	187
Texas:			
Calvin	7-8-5	8	310
Tidal:			
Dunn	12-8-4	1	50
Everett	18-8-5	2	65
Smith	8-8-5	1	130
Twin State:			
Calvin	7-8-5	2	150
Wilcox:			
Smith	8-8-5	5	1,927
Total		122	12,000

Mission Pool

Amerada:			
Rice	5-8-6	2	1,020
Carter:			
Fuswa	18-8-6	4	770
Melisse	9-8-6	1	635
Micco	8-8-6	2	295
Darby:			
Judy	1-8-5	1	0
Gypsy:			
Baby	6-8-6	1	0
Barkus, N.	6-8-6	10	6,170
Barkus, S.	7-8-6	1	122
Dosar	7-8-6	5	1,338
Hardy	7-8-6	7	365
Harjoche	7-8-6	4	177
Micco, L.	8-8-6	2	45
Micco, S.	8-8-6	1	20
Mission	5 and 6-8-6	7	2,165
Mosar	1-8-5	4	1,075
Independent:			
Lawson	1-8-5	5	1,500
Independent & Kistler:			
Payne	7-8-6	4	1,577
Marland:			
Maines	7-8-6	4	1,145
McMahon et al:			
Harjo	7-8-6	2	875
Mid-Kansas:			
Moore	7-8-6	1	0
Mid-Cont.:			
Ripley	18-8-5	1	140
Minnehoma:			
Neal	7-8-6	4	714
Pine:			
Harjo	6-8-6	2	805
Micco	8-8-6	1	27
Prairie:			
Crain	7-8-6	1	160
Melton	6-8-6	3	1,440
Micco	5-8-6	1	10
Townsend	6-8-6	1	415
Prairie & Gypsy:			
Owens	18-8-6	2	425
Nellie	12-8-5	1	10
Shaffer:			
Weaver	12-8-5	3	1,405
Shell & Marland:			
Herndon	7-8-6	3	1,415
Shell & Papoose:			
Maines	7-8-6	8	1,380
Sinclair:			
Hardy	7-8-6	4	1,240
Sinclair & Lenox:			
Judy	1-8-5	1	60
Tidal:			
Nelly	12-8-5	5	1,750
Twin State:			
Hayes	8-8-6	2	1,430
Judy	6-8-6	3	1,315
Ripley	12-8-5	1	280
Total		115	33,715

Bowlegs Pool

Amerada:			
Roscoe	15-8-6	6	750
Atlantic:			
Baker	10-8-6	4	230
Fleet	23-8-6	3	95
Grayson	13-8-6	4	485
Jones, A.	16-8-6	2	25
Jones, C.	9-8-6	1	60
Barnsdall:			
McNac	28-8-6	1	22
Murrow	11-8-6	4	304
Carter Oil:			
Bowlegs	15-8-6	4	402
Buden	23-8-6	2	210
Harjoche	14-8-6	6	387
Hilly	23-8-6	3	230
Jones	11-8-6	4	477
Walker	15-8-6	4	215
Wise	23-8-6	11	1,382
Dixie:			
Culley	11-8-6	1	40
Empire:			
Lacy	14-8-6	6	225
Wise	23-8-6	2	160
Gypsy:			
Bowlegs	22-8-6	1	7
Bradley	9-8-6	1	0
Cumsey	10-8-6	4	357
Grayson	13-8-6	4	518
Harjoche	10-8-6	3	75
Jones	11-8-6	1	52
Walker	15-8-6	7	1,138
Wise	23-8-6	2	25
I. T. I. O.:			
Barnett	24-8-6	2	89
Barnett "B"	23-8-6	1	41
Billington	22-8-6	3	323
Bowlegs	22-8-6	9	1,318
Davis	13-8-6	4	86
Fay	13-8-6	9	926
Goforth	15-8-6	12	1,349
Livingston	15-8-6	10	1,351
Lizzie	13-8-6	3	409
Walker	15-8-6	8	1,011
Williams	12-8-6	1	210
Wilmott	15-8-6	4	366
Work	24-8-6	1	15
Youngblood	24-8-6	2	56
Magnolia:			
Davis	13-8-6	3	347
Davis, M.	13-8-6	1	56
Hammond	10-8-6	8	535
Rhodes	12-8-6	5	332
Van Buskirk	9-8-6	4	380
McCulloch:			
Bowlegs	22-8-6	2	98
Mid-Continent:			
Baker	10-8-6	4	196
Smith	12-8-6	6	575
Minnehoma:			
Bowlegs	15-8-6	3	6
Prairie:			
Gahagan	23-8-6	3	175
Harber	10-8-6	8	1,200
Jones	3-8-6	1	315
Jones	11-8-6	4	160
Templeton	12-8-6	4	1,965
Whitney	23-8-6	4	415
Pure Oil:			
Reed	14-8-6	14	2,507
Strother "D" ..11 and	14-8-6	4	362
Strother "F"	10-8-6	7	2,121
Shaffer:			
Lacy	14-8-6	3	455
Shell:			
Taylor	16-8-6	5	27
Sinclair:			
Cumsey	10-8-6	4	920
Harjo	14-8-6	3	590
Jones	9-8-6	7	300
E. Jones	11-8-6	5	639
Taylor	10-8-6	4	680
Taylor, W.	10-8-6	3	455
Walker	22-8-6	4	927
Texas:			
Reed	14-8-6	11	600
Tidal:			
Grayson	13-8-6	4	385
Harjoche	10-8-6	6	750
Total		300	33,897

Earlsboro Pool

Amerada:			
Anderson	15-9-5	2	224
Cowden	4-9-5	7	922
Rogers	3-9-5	2	86
Atlantic & Sinclair:			
Foreman	18-9-5	1	105
Barnsdall:			
Brown	10-9-5	3	1,111
Bruner, F.	2-9-5	2	149
Bruner, N.	10-9-5	1	283
Cudjo	14-9-5	1	23
Davis, D.	11-9-5	3	178
Davis, J.	11-9-5	4	358
Davis, M.	11-9-5	2	32
Gibson	9-9-5	7	969
Hern	15-9-5	1	1
Ingram	1-9-5	7	328
Pack, S.	10-9-5	4	91
Peter	10-9-5	3	47
Sango	1-9-5	2	1,353
Sebalka	15-9-5	1	178
Sullivan, H.	11-9-5	1	5
Sull-Harjo	10-9-5	2	17
Wasutke	12-9-5	3	489
Burke-Greis:			
Wisner	6-9-6	2	240
Burke-Greis & Red Bank:			
Mays	1-9-5	3	1,825
Carter:			
Davis	13-9-5	3	40
James	6-9-6	3	1,595
Carter et al:			
Gilliam	13-9-5	2	1,292
Continental:			
Kays	2-9-5	2	27
Spencer	12-9-5	4	605
Cosden, J. S., Inc.:			
Anderson	13-9-5	2	2,564
Empire:			
Barker	12-9-5	1	25
Edmondson	3-9-5	2	52
Empire & Marland:			
Anderson	13-9-5	2	432
Empire & Amerada:			
Bullock	8-9-5	2	1,055
Gypsy:			
Bruner	10-9-5	4	1,397
Carter, B.	11-9-5	7	1,682
Earl	16-9-5	1	17
Hunick	5-9-5	2	1,780
Noble	12-9-5	4	277
Payne	18-9-6	1	4,955
Peter	10-9-5	1	96
Sango	1-9-5	13	1,732
State	16-9-5	3	340
Independent:			
Bruner	10-9-5	3	193
Sullivan	10-9-5	1	13
Knapp	8-9-5	2	1,262
Indep.-Margay:			
Gains	11-9-5	3	145
Magnolia:			
A. Anderson	18-9-6	4	16,376
D. W. Anderson	18-9-6	1	2,716
Bryant	9-9-5	6	35
Cowden	4-9-5	1	22
Dixon	12-9-5	1	14
Edmondson	3-9-5	1	3
Germany	30-9-5	1	9
Gilliam	13-9-5	3	1,843
Holmsley	11-9-5	6	9
Hyde	13-9-5	2	53
Ingram	10-9-5	1	15
Lena	10-9-5	3	42
Moore	24-9-5	1	834
Seay	12-9-5	9	126
Simpson	10-9-5	4	227
Sparks	11-9-5	6	101
Sullivan	12-9-5	3	98
Mid-Continent:			
McCumber	9-9-5	4	50
Rogers	5-9-5	4	3,250
Mid-Kansas:			
Anderson	14-9-5	1	30
Phillips:			
Dunaway	14-9-5	1	20
Reese	8-9-5	1	0
Prairie:			
Baker	24-9-5	4	585
Davis	13-9-5	3	435
Graham, C.	3-9-5	2	0
Graham, O.	10-9-5	4	820
James	6-9-6	2	0
Hartman	18-9-6	1	4,170
Stidham	11-9-5	9	700
Prairie & Skelly:			
Campbell	6-9-6	6	3,150
Prairie & Whitney:			
Harjo	24-9-5	1	25
Shaffer:			
Clark	1-9-5	2	165
Shell:			
Bayless	17-9-5	1	12
Hearn	13-9-5	1	61
Spencer	12-9-5	2	1,008
Sinclair:			
Alexander	36-10-5	1	785
Foreman	18-9-5	1	15
Hollins	12-9-5	1	15
Miller	24-9-5	1	810
Sango	2-9-5	4	1,350
Skelly:			
Mays	1-9-5	4	675
Shepard	6-9-6	4	1,540
Spencer	12-9-5	1	152
Skelly & Atlantic:			
Cherry	6-9-6	4	169
Lottie	6-9-6	4	1,400
Varman	5-9-6	1	182
Superior:			
Ingram	1-9-5	2	1,215
Walker	2-9-5	2	1,222
Texas:			
Anderson	2-9-5	8	80
Brown	10-9-5	8	110
James	6-9-6	2	150
Rogers	5-9-5	5	905
Wilmott	10-9-5	6	85
Tidal:			
Walker	35-10-5	3	1,365
Watkins	9-9-5	7	1,955
Twin State:			
Barker	12-9-5	3	40
Hern	2-9-5	2	50
Total		306	82,598

Seminole Pool

Amerada:			
Fixico	23-9-6	3	80
Killingsworth	23-9-6	4	441
Rentie	23-9-6	3	317
Atlantic:			
Cudjo, N.	35-9-6	3	420
Barnsdall:			
Carter	24-9-6	6	214
Henry	14-9-6	2	407
Jones	34-9-6	4	513
Carter Oil:			
B. Carter	24-9-6	2	40
F. Carter	23-9-6	3	92
Creamer	34-9-6	1	7
Cudjo, R.	35-9-6	4	220
Cudjo, W.	34-9-6	1	122
Gilliland	27-9-6	1	170
Grisso	23-9-6	4	180
Grisso, M.	15-9-6	1	220
Killings, G. F.	14-9-6	4	35
Killings, M. E.	23-9-6	12	4,045
Knapp	13-9-6	1	32
Lukes	27-9-6	5	920
Pounder	34-9-6	2	170
Simpson	35-9-6	2	122
Strothers	34-9-6	4	285
Vierson	23-9-6	1	17
Sampara	10-9-6	1	300
Empire:			
Gross	25-9-6	1	45
Wilson	24-9-6	2	295
Gypsy:			
Butler	35-9-6	4	540
Carter	24-9-6	8	640
Cudjo	34-9-6	4	390
Fixico	26-9-6	7	65
Harjo	25-9-6	3	380
Wolfe	26-9-6	5	434
Independent:			
Fixico, P.	23-9-6	3	460
Harjo	25-9-6	2	60
Butler	35-9-6	3	820
Fixico, T.	26-9-6	5	110
Jones	26-9-6	4	342
I. T. I. O.:			
Allen	25-9-6	2	21
Bowlegs	26-9-6	12	1,958
Goodin	23-9-6	4	400
Harjo	23-9-6	3	48
James	24-9-6	2	97
Reed	24-9-6	1	8
Kingwood:			
Johnson	22-9-6	3	418
Magnolia:			
Boren	2-8-6	1	4
Franks	25-9-6	3	156
Mid-Continent:			
Rentie	14-9-6	9	480
Tayeche	24-9-6	5	165
Phillips:			
Strothers	27-9-6	2	45
Prairie:			
Cudjo	35-9-6	3	260
Franks	35-9-6	6	985
Giblet	35-9-6	3	1,440
Gross	25-9-6	5	35
Mason	36-9-6	1	60
Spencer	13-9-6	1	6
Strothers	27-9-6	8	1,900
Tiger	1-8-6	1	35
Pure Oil:			
Strothers	26-9-6	17	4,618
Strothers, B.	36-9-6	4	742
Strothers, C.	34-9-6	1	377
Shell:			
Harber	22-9-6	1	203
Lasley	22-9-6	2	35
Sinclair:			
Carter	13-9-6	2	22
Cudjo "A"	35-9-6	6	720
Cudjo "B"	35-9-6	4	700
Dicey	22-9-6	2	540
Fixico	23-9-6	4	210
Superior:			
Cudjo	35-9-6	4	106
Noble	15-9-6	1	1
Texas:			
Mayhue	14-9-6	1	10
Strothers	2-9-6	1	55
Tidal:			
Carter	24-9-6	4	262
Fixico	26-9-6	7	1,620
Harjo	25-9-6	1	15
Harjo, T.	23-9-6	3	55
Turman:			
Cudjo	35-9-6	4	443
Grisso	35-9-6	1	58
Jones	34-9-6	4	998
Total		273	34,261

East Seminole Pool

Barnsdall:			
Keypaga	7-9-7	1	23
Continental:			
Johnson	18-9-7	1	1,622
Devonian:			
Harjo	18-9-7	1	0
Gypsy:			
Harjo	18-9-7	1	0
Magnolia:			
Drewey	18-9-7	1	10

Company, farm—	Location	Wells	Prod.
Marland:			
Boring	17-9-7	1	71
Marland & Sinclair:			
Perry	18-9-7	1	753
Prairie:			
Stubbs	18-9-7	2	290
Shaffer:			
Higler	19-9-7	1	15
Sinclair:			
Coody	18-9-7	1	1,495
I. Coody	17-9-7	1	192
G. Johnson	18-9-7	1	0
Thompson (B)	18-9-7	1	757
J. Warrior	17-9-7	1	45
S. Warrior	17-9-7	1	57
Total		16	5,330

Searight Pool

Amerada:			
Johnson	4- 9-6	1	26
Strothers	3- 9-6	2	285
Barnsdall:			
Jackson	5- 9-6	2	51
Carter:			
Davis	4- 9-6	3	300
Frazier	3- 9-6	5	725
Kiker	2- 9-6	1	17
Stewart	10- 9-6	1	400
Mandler	3- 9-6	2	7
Slick	11- 9-6	2	1,290
Scott	26-10-6	1	12
I.T.I.O.	11- 9-6	1	395
Carter et al:			
Strothers	11- 9-6	2	1,310
Skiff	10- 9-6	1	105
Gypsy:			
Cudjo	4- 9-6	3	190
Nevins	32-10-6	2	0
Magnolia:			
Varnum	32-10-6	2	816
Magnolia:			
Varnum	5- 9-6	1	0
Mid-Continent:			
Grayson	34-10-6	4	25
Saloche	33-10-6	6	405
Mid-Cont. & Homaokia:			
Nevins	32-10-6	4	1,155
Papoose:			
Marks	32-10-6	1	494
Pine:			
Lula	4- 9-6	1	14
Prairie:			
Cannon	33-10-6	1	2
J. Carter	10- 9-6	1	3
Houch	33-10-6	1	3
Hurford	33-10-6	1	0
Kincaid	33-10-6	2	50
Wimer	22-10-6	1	15
Pure:			
Aldridge	3- 9-6	4	759
Shell:			
Strothers	3- 9-6	4	185
Sinclair:			
Polly	3- 9-6	4	1,355
Superior:			
Varnum	4- 9-6	1	0
Texas:			
Fleet	4- 9-6	1	17
Twin State:			
Varnum	4-9-6	2	125
Wilcox:			
Chupco	4- 9-6	7	194
Total		79	11,054

Production of St. Louis Pool

Production of St. Louis and Asher Pools by companies and leases for July 11 follows:

St. Louis Pool

Company, farm—	S-T-R	Wells	Prod.
Atlantic-Independent:			
Burke	16-7-4	1	515
Barnsdall:			
Stahl	30-7-5	3	827
Carter:			
Akin	2-7-4	1	30
Blackwell-Omar:			
Cherry	25-7-4	3	760
Darby:			
Youngblood	16-7-4	1	324
Nixon	9-7-4	1	210
Gypsy:			
Bruner	25-7-4	4	102
Collins	25-7-4	4	645
Dodson	26-7-4	4	110
Green	17-7-4	1	430
LeClair	23-7-4	4	2,087
Roseman	26-7-4	4	622
Stahl	30-7-5	8	495
Home Gas:			
Town Lots	14-7-4	1	275
Houston:			
Wyatt	17-7-4	1	518
Independent:			
Borrow	1-7-4	2	1,366
Blandin	30-7-5	5	880
Youts	19-7-5	8	7,290
Independent-Darby:			
Pappen	16-7-4	1	522
Independent-Westland:			
Rhodd	16-7-4	2	2,062
Interocean:			
McGee	23-7-4	6	300
I. T. I. O.:			
Shobe	35-8-4	1	452
Irwin-Martin:			
Kelly	2-7-4	2	1,915
Magnolia:			
Banta	14-7-4	3	402
Brandenburg	18-7-5	5	1,575
Caudle	13-7-4	1	70
Cherry-A	26-7-4	5	900
Cherry-B	26-7-4	3	216
G. W. Fyke-A	20-7-5	1	565
G. W. Fyke-B	20-7-5	2	475
Tull Fyke-B	20-7-5	2	632
Tull Fyke-D	20-7-5	2	212
Hembree	19-7-5	4	333
Latimer	17-7-4	2	516
J. M. Robbins	15-7-4	4	245
Pearl Robbins	15-7-4	1	63
Mary Wilborn	24-7-4	2	482
S. A. Wilborn	24-7-4	5	894
Chas. Youts	20-7-5	5	582
C. A. Youts	19-7-5	4	601
H. E. Youts	20-7-5	7	3,372
Magnolia-Pierce:			
Hughbanks	17-7-4	1	812
McCullough-Black:			
Bruno	25-7-4	5	935
McCullough-Mid-Continent:			
Smith	25-7-4	6	720
Mid-Kansas:			
Getzleman	25-7-4	4	920
Lunay	30-7-5	3	370
Phillips:			
Cherry	25-7-4	2	175
Grace	2-7-4	1	30
Stahl	30-7-5	4	730
Prairie:			
Desmond	25-7-4	4	125
Ellison	25-7-4	4	425
Cammon	30-7-5	8	3,185
Hembree	19-7-5	4	3,057
Linn	30-7-5	4	700
Wolfe	29-7-5	4	3,220
Youts	19-7-5	4	290
Prairie et al:			
Davis	18-7-5	4	117
Prairie-Maud:			
Nesbit	18-7-5	2	190
Prairie-Shaffer:			
Rice	17-7-4	1	1,045
Pure:			
Dodson	26-7-4	2	127
Thomas	26-7-4	4	6,970
Tolen	1-7-4	1	0
Shaffer:			
Cherry	23-7-4	4	195
Tolon	30-7-5	4	510
Sinclair:			
Blandin	24-7-4	13	1,240
Brandenberg	7-7-5	3	1,195
Bruno	26-7-4	2	2,800
Gilbreath	25-7-4	2	825
Nadash	29-7-5	5	425
Nealy	25-7-4	5	250
Nealy-B	25-7-4	2	655
Nesbit	18-7-5	8	2,295
O'Kl chee	19-7-5	7	415
Sinclair-McGraw:			
Kelly-K	2-7-4	1	40
Superior:			
Jackson	36-8-4	1	125
Texas:			
Cherry	25-7-4	4	1,000
Warner-Quinlan:			
Light	18-7-4	1	0
Westheimer-Daube:			
Freid	24-7-4	5	690
Small pumpers		111	3,685
Total St. Louis Pool		368	75,558

Asher Pool

Commerce Dev.:			
Townsite	19-6-4	1	355
Independent-Twin State:			
Gardner	19-6-4	1	96
Prairie-Slick:			
Laster	19-6-4	3	4,140
Simms:			
Laster	19-6-4	2	2,300
T. B. Slick:			
Bledsoe	20-6-4	1	115
Welden	20-6-4	3	460
Slick-Amerada:			
Walker	19-6-4	1	144
Total Asher Pool		12	8,906

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 72)

Gulf Prod. Co.'s No. 2 Saunders, 990 ft. N and E, SW cor., Sec 3, Blk. 1, A.C.H.&B.R.R. Sur. ..... Set 12½-in. csg. 272 ft.

Herrogan Oil Co.'s No. 1 Bradford, 330 ft. from N and 990 ft. from E, Sec. 123, Blk. B-2 ..... Material.

Independent O. & G. Co.'s No. 1 Hollenbeck, 990 ft. each way from NE cor. NE, Sec. 176, Blk. 3, I.& G.N.R.R. Sur. ..... 5,000,000 ft. gas from 2,428-33 ft; drlg. 3,040 ft.

Lyon et als' No. 1 Morse, 330 ft. N and E SW cor. N½ NE, Sec. 2, Blk. 26, H.&G.N.R.R. Sur. ..... Rigging up.

Magnolia Pet. Co.'s No. 1 Wright, 330 ft. S and W lines S½ SW, Sec. 15, Blk. 3, I.&G.N. Sur. ..... Building rig.

McLain Oil Co.'s No. 1 Back, 1,000 ft. from W line and 330 ft. from N line, NW, Sec. 24, Blk. 25, H.&G.N. Sur. ..... 1,000,000 ft. gas 2,105-10 ft. and estimated 3,000,000 ft. gas 2,203-08 ft; S.D. 2,642 ft; show oil 2,-565-90 ft.

Marland Prod. Co.'s No. 3 Finley-Brown, 1,224 ft. from E line, 330 ft. from N line, Sec. 32, Blk. B-2, H.& G.N. Sur. ..... Show oil 2,400 ft; 1,000,000 ft. gas 2,540-55 ft; S.D. 2,902 ft; 500 ft. oil in hole; T.P. 2,858 ft; swabbing 5 bbls. per hr.

Midwest Explta. Co.'s No. 2-B Bowers, 1,320 ft. from N, 330 ft. from E, Sec. 93, Blk. B-2, H.&G.N.R.R. Sur. ..... Location.

Mordyan O. & G. Co.'s No. 2 Davis, 330 ft. from N, 990 ft. from E, S½ NW, Sec. 8, Blk. 1 ..... Location.

Nabob Oil Co.'s No. 2 Morse, 660 ft. from W line and 330 ft. from S line SW, Sec. 67, Blk. 25, H.&G.N. R.R. Sur. ..... T.D. 2,602 ft; spraying 20 bbls. oil; 10,000,000 ft. gas 2,465 ft.

Oil Operators' No. 1 Bowers, 330 ft. from N, 330 ft. E, Sec. 93, Blk. B-2, H.&G.N. Sur. ..... Building rig.

Osborn et als' No. 1 Morse-H, 330 ft. N and E SW cor. S½ NE, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... Building rig.

Phillips Pet. Co.'s No. 1 Eakin, 330 ft. from S, 330 ft. from W, Sec. 56, Blk. 25, H.&G.N.R.R. Sur. ..... Building rig.

Phillips Pet. Co.'s No. 1 Jackson, 330 ft. each way from NE cor. NE, Sec. 58, Blk. B-2, H.&G.N.R.R. Sur. ..... Show oil 2,712-22 ft; S.D. 2,991 ft; 250 ft. oil in hole.

Pillips Pet. Co.'s No. 2-A Jackson, 425 ft. S and E, NW NE, Sec. 88, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 1,775 ft.

Phillips Pet. Co.'s No. 5 Jackson, 330 ft. S and 990 ft. E NW cor. S½ NE, Sec. 88, Blk B-2, H.&G.N. Sur. ... S.D. 2,855 ft; 6,000,000 ft. gas 2,-850 ft.

Phillips Pet. Co.'s No. 4 Palmer, 330 ft. N and W of E 831 ac., Sec. 31, Blk. B-2 ..... Drlg. 2,380 ft.

Prairie O. & G. Co.'s No. 1 Langham, 330 ft. N and E SW, Sec. 1, Blk. B-2, H.&G. N.R.R. Sur. ..... Rigging up.

Panhandle Ref. Co.'s No. 1 Saunders, 330 ft. S and E NW cor. E½ NE, Sec. 3, Blk. 1, A.C.H.&B. Sur. .... 15,000,000 ft. gas 2,150-2,320 ft; show oil 2,663 ft; T.D. 2,781 ft; shot 150 qts. from 2,630-2,759 ft, and 340 qts. from 2,640-2,759 ft; bailed 2 bailers oil; C.O.

Panhandle Ref. Co.'s No. 2 Saunders, 330 ft. S and W NE cor. E½ NE, Sec. 3, Blk. 1, A.C.H.&B. Sur. .... Fishing 2,850 ft.

Quillian et als' No. 1 Barrett, 330 ft. from N, 330 ft. from E, Sec. 131, Blk. 3, H.&G.N. Sur. ..... Rig.

Scott Drlg. Co. et als' No. 1 Chapman, 330 ft. N and E SW cor. S½ NE, Sec. 69, Blk. 25, H.&G.N. Sur. ..... Show gas 2,500 ft; drlg. 2,747 ft; spraying 5 bbls. per hr. 2,705 ft.

Ray Massie's No. 4 Chapman, 330 ft. each way from NW SE SW, Sec. 51, Blk. 25, I.&G.N. Sur. ..... S.D. 2,767 ft; spraying 10 bbls. per hr. 2,720-50 ft.

Shamrock Oil Co.'s No. 1 Clayton, 150 ft. from NE cor. of S 80 ac. of W 140 ac. of E 277 ac., Sec. 50, Blk. 25, H.&G.N. Sur. ..... Location.

Shamrock Oil Co.'s No. 2-J Chapman, 450 ft. from N, 150 ft. from E, of W 41 ac. of E 319 ac. ..... Spudding 150 ft.

Shell Pet. Corp.'s No. 2 McConnell, 330 ft. N and W SE cor. Sec. 174, Blk. 3, I.&G.N.R.R. Sur. ..... Drlg. 2,350 ft.

Sherwood et als' No. 1 Gething, 330 ft. N and W SE cor. N½ NE, Sec. 14, Blk. A-9, H.&G.N. Sur. ..... Spudded and S.D.

Skelly Oil Co.'s No. 1 Jackson, 330 ft. from S and W lines E½, Sec. 62, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,473 ft; show gas 2,394-2,-410 ft.

Skelly Oil Co.'s No. 2 Jackson, 330 ft. S, 2,990 ft. W of W 160 ac., Sec. 90, Blk. B-2 ..... Drlg. 1,971 ft.

Skelly Oil Co.'s No. 3 Jackson, 330 ft. from S and E lines of W 160 ac., Sec. 90, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 1,538 ft.

St. Clair Oil Co.'s No. 1 Dial, 330 ft. S and W NE cor. SE, Sec. 10, Blk. 25, H.&G.N.R.R. Sur. ..... Cellar.

St. Clair Oil Co.'s No. 1 Rowe, Sec. 32, Blk. R ..... S.D. 3,490 ft. with H.F.W.

St. Clair Oil Co.'s No. 1 L. S. Stockton, SE cor. Sec. 35, W. R. Lee Sur. ..... Spudded and S.D.

Sun Oil Co.'s No. 3 Purviance, 250 ft. from S, 287 ft. from W, Sec. 61, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,790 ft.

The Texas Corp.'s No. 10 Bowers, 330 ft. from N and E lines of E½, Sec. 89 ..... Drlg. 1,720 ft.

The Texas Corp.'s No. 11 Bowers, 330 ft. S, 990 ft. E, of E½, Sec. 89 ..... Drlg. 2,010 ft.

The Texas Corp.'s No. 12 Bowers, 330 ft. from N and 330 ft. from W of NE, Sec. 63, Blk. B-2 ..... Drlg. 2,120 ft.

The Texas Corp.'s No. 13 Bowers, 990 ft. from N and 330 ft. from W line E½, Sec. 89, Blk. B-2, H.&G. N.R.R. Sur. ..... Drlg. 664 ft.

The Texas Corp.'s No. 3 Bruce Bull, 330 ft. from N, 330 ft. from W, Section 2, Blk. B-2 ..... Spudding.

The Texas Co.'s No. 2 Comb-Worley, 330 ft. N and 2,310 ft. W SE cor. S½ S line, Sec. 36, Blk. 3, I.&G.N. Sur. Drlg. 2,794 ft.

The Texas Co.'s No. 3 Comb-Worley, 330 ft. N and W SE cor. Sec. 36, Blk. 3, I.&G.N. Sur. ..... Building rig.

The Texas Co.'s No. 4 Comb-Worley, 330 ft. N and 1,-736 ft. W SE cor. Sec. 36, Blk. 3, I.&G.N. Sur. .... Building rig.

The Texas Corp.'s No. 4 Cook-Faulkner, 1,973 ft. from W line and 330 ft. from N line of W 160 ac., Sec. 29, Blk. B-2, H.&G.N. Sur. ..... Drlg. 2,810 ft; first gas.

The Texas Corp.'s No. 3 Cook-Faulkner, 1,313 ft. from W line and 330 ft. from N line of W 160 ac., Sec. 29, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,550 ft.

The Texas Co.'s No. 2 McLarty-B, at center of J. M. Rose Sur. ..... Drlg. 870 ft.

The Texas Co.'s No. 4 Williams, 330 ft. each way from NE NE NW, Sec. 6, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 2,615 ft.

White Eagle O. & R. Co.'s No. 1 Faulkner, 330 ft. each way from SE cor. of E 60 ac., Sec. 29, Blk. B-2, H.&G.N. Sur. ..... Location.

P. A. Thorp's No. 1 Finley, 3,416 ft. from S and 330 ft. from W of B. F. Chaney Sur. ..... Building rig.

Wilcox-Pampa Oil Co.'s No. 7 Comb-Worley, 330 ft. N and E SW cor. SE, Sec. 60, Blk. 3, I.&G.N. Sur. .... Show oil 2,930 ft; S.D. 3,015 ft.

Wilcox-Pampa Oil Co.'s No. 8 Comb-Worley, 330 ft. NW SE SE, Sec. 60, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,440 ft.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood, 320 ft. from N and W lines, League 7, Wilbarger County School lands; elevation 3,363 ft; contract depth 5,000 ft. ..... Drlg. 1,600 ft.

HARTLEY COUNTY

Amarillo Oil Co.'s No. 9 Lee Bivins "A," C NW, Sec. 6, Blk. 21 ..... Show oil 3,780 ft; 100,000 ft. wet gas 3,990 ft; T.D. 4,145 ft; to plug back.

HUTCHINSON COUNTY

Amarillo Oil Co.'s No. 2 Ingerton-A, 1,650 ft. from N line, 1,071 ft. from E line, Sec. 41, H.&T.C.R.R. Sur. .. 50,000,000 ft. gas 1,300 ft; drlg. 2,050 ft; 500,000 ft. gas 1,660 ft.

Danciger et als' No. 2 Moore, 330 ft. from E, 990 ft. from S, W½ SE, Sec. 125, Blk. 4 ..... Drlg. 900 ft.

Holmes et als' No. 2 Quinn, 990 ft. from S line and 330 ft. from E line SW, Sec. 7, Blk. 9, I.&G.N. Sur. .... Drlg. 1,600 ft.

Huey et als' No. 3 Smith et al, 330 ft. from N and 600 ft. from W of S 40 ac. of E 100 ac., SE, Sec. 12, Blk. Y ..... Spudded and S.D.

Marland Oil Co.'s No. 2 Reimer, 3,753 ft. S and 450 ft. E of NW cor., Sec. 31, Blk. 47, H.&T.C. ..... Cellar.

McMan O. & G. Co.'s No. 2 Sanford, 300 ft. from W line and 315 ft. from S line N 274 ac., Sec. 83, Blk. 46, H.&T.C Sur. ..... Drlg. 2,610 ft.

Midwest Explta. Co.'s No. 2 Moore, 330 ft. from S, 1,320 ft. from W, Sec. 125, Blk. 4, H.&G.N. Sur. ..... Building rig.

Oil Operators Trust Co. and Marland's No. 2 J. M. Stanford-B, Sec. 82, Blk. 46, H.&T.C. Sur. ..... S.D. 3,039 ft.

O. B. Penney's No. 2 Johnson Bros., 330 ft. from S line, 330 ft. from W line W½ NE, Sec. 35, Blk. Y, A.&B. Sur. ..... Drlg. 1,750 ft.

Phillips Pet. Co.'s No. 1 Cheatham, 427 ft. N and 330 ft. W SE cor. SE SE, Sec. 38, Blk. Y ..... Drlg. 765 ft.

Phillips Pet. Co.'s No. 1 Johnson Bros., 330 ft. from N and W lines NW, Sec. 34, Blk. Y, A.&B. Sur. ..... S.D. 2,815 ft.

Phillips Pet. Co.'s No. 1 Johnson-Kotz, 350 ft. N and 330 ft. E SW W½ SW, Sec. 35, Blk. Y ..... Drlg. 275 ft.
Phillips Pet. Co.'s No. 4 Johnson, Sec. 28, Blk. Y, A. &B. Sur. ..... Drlg. 2,240 ft.
Phillips' No. 1 Sanford-Glass, 660 ft. S and E of NW cor. S 80 ac. of N 160 ac. of S 320 ac., Sec. 30, Blk. 46, H.&T.C. Sur. ..... T.D. 2,762 ft; pay 2,733-62 ft; flowed 37 bbls; C.O.
Phillips Pet. Co.'s No. 6 (Florence), 330 ft. each way from S and W lines, E½ ..... Drlg. 1,975 ft.
Prairie O & G. Co.'s No. 4 Cal Merchant, 5,612 ft. S and 330 ft. E NW, Sec. 37, Blk. 47, H.&T.C.R.R. Sur. S.D. 305 ft.
Prairie O. & G. Co.'s No. 4 Shaw, 330 ft. S and 990 ft. W NE cor., Sec. 27, Blk. Y ..... Drlg. 1,870 ft.
Skelly Oil Co.'s No. 8 Whittenburg, 330 ft. from S and 2,230 ft. from W, Sec. 22, Jameson Sur. ..... S.D. 889 ft.
Skelly Oil Co.'s No. 7 Whittenburg, 330 ft. from S and 1,570 ft. from W lines, Sec. 22, Jameson Sur. ..... Drlg. 1,860 ft.
The Texas Co.'s No. 2 Quinn, 990 ft. N, 330 ft. E SW cor. E½, Sec. 7, Blk. 9, L.&G.N. Sur. ..... Drlg. 450 ft.

KING COUNTY

Huff Oil Co.'s No. 1 Martin, 1,320 ft. from N line and 1,320 ft. from E line, Sec. 171, Blk. F, H.&T.C. Sur... Rig.

LAMB COUNTY

Dan Freed et als' No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... Drlg. 1,320 ft.

LIPSCOMB COUNTY

Brown et als' No. 1 Box T Ranch, SW NE, Sec. 612, H.&T.C. Sur. ..... S.D. 3,128 ft.
Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... S.D. 4,520 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small show oil 1,133-40 ft; sand; fish. 4,167 ft.

MOORE COUNTY

Amarillo Oil Co.'s No. 1 Read-A, C NW, Sec. 14, Blk. 13-12, D.&P. Sur. ..... Drlg. 860 ft.
Amarillo Oil Co.'s No. 1 Perkins-A, 330 ft. each way out of NW cor. NE, Sec. 76, Blk. 3 ..... Spudded and S.D.
Amarillo Oil Co.'s No. 2 Warrick, C S 160 ac., Sec. 92, Blk. 46, H.&T.C. Sur. ..... 60,000,000 ft. gas from 1,580-2,910 ft; show oil; T.D. 3,259 ft; to complete as gas well.
Barnsdall Oil Co.'s No. 1 Harrison, 330 ft. from N line and 330 ft from E line S½ NE, Sec. 5, Blk. M-2 .. Drlg. 3,065 ft.
Canadian River Gas Co.'s No. 1 J. M. Shelton, 330 ft. each way from SE cor. Sec. 52, Blk. 3, G.&M. Sur... Location.
Dana O. & G. Co.'s No. 1 Anthony, C NW, Sec. 260, Blk. 44, H.&T.C.R.R. Sur. ..... Rig.
Dana O. & G. Co.'s No. 1 Road-A, C NW, Sec. 14, Blk. B-12 ..... Location.
Fritch O. & G. Co.'s No. 1 Lee Burns, C NE 40 ac. of N 160 ac., Sec. 4, Geo. Mahan Sur. ..... Drlg. 950 ft.
Phillips Pet. Co.'s No. 1 Taylor, 330 ft. N and E SW cor. E½ NW cor. Sec. 244, Blk. 3-T T.&N.O. Sur. ... 5,000,000 ft. gas from 2,825-2,935 ft; 10,000,000 ft. gas 3,020 ft; 20,000,000 ft. gas 3,040 ft; reset 6-in. csg; drlg. 3,435 ft; running 5 3-16-in. csg.
Phillips' No. 1 Wilson, 330 ft. each way out of NW cor. S½ SE, Sec. 157, Blk. 3-T ..... Standardizing at 2,598 ft.
Skelly Oil Co.'s No. 8 Armstrong & Byrd, 2,920 ft. S and 3,752 ft. of NW cor. Proctor Sur. ..... 27,000,000 ft. gas 2,550-2,760 ft; T.D. 2,832 ft; 47,000,000 ft. gas 2,550-2,760 ft.
Skelly Oil Co.'s No. 9 Armstrong & Byrd, 2,220 ft. S and 990 ft. E NW cor. Proctor Sur. ..... S.D. 2,730 ft; 9,000,000 ft. gas 2,695-2,720 ft.

MOTLEY COUNTY

Expltn. Co's No. 5 Matador, C, Sec. 45, Blk. J-B, C. B.&C.N.G.R.R. Sur. ..... S.D. 529 ft.
Expltn. Co.'s No. 6 Matador, 330 ft. from N line and 330 ft. from E line, Sec. 132, Blk. M ..... Running 15½-in. csg. 150 ft.
Matador Oil Corp.'s No. 1 Owen, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... Rig.

RANDALL COUNTY

W. H. Patterson's No. 1 Palo Duro, Sec. 60, Blk. K-14 .. S.D. 1,250 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Ledrick, Sec. 7, Blk. 5-A..... S.D. 5,975 ft.

WHEELER COUNTY

Anderson's No. 1 Meiners, C SW SE, Sec. 71, Blk. 17, H.&G.N.R.R. Sur. ..... Drlg. 1,770 ft; 9,000,000 ft. gas 1,710-70 ft.
Angus et als' No. 1 Linkey, C NE NW, Sec. 126, Blk. 23.. S.D. 450 ft.
Byrens et als' No. 1 Johnson, SW cor. NE, Sec. 88, Blk. A-5, H.&G.N. Sur. ..... S.D. 2,920 ft.
Fain et als' No. 2 Binkley & Cain, C SE, Sec. 5, Blk. 24, H.&G.N. Sur. ..... Fishing 325 ft.
Gillespie et als' No. 1 McMurtrey, C NW SE, Sec. 67, Blk. 17, H.&G.N. Sur. ..... T.D. 1,975 ft; 10,000,000 ft gas 1,810-1,975 ft.
Johnson et als' No. 1 Hicks, C NW SW, Sec. 49, Blk. 17, H.&G.N.R.R. Sur. ..... Drlg. 670 ft.
Johnson & Wisch Kamper's No. 1 West, C NE NW, Sec. 30, Blk. 17, H.&G.N. Sur. ..... Drlg. 460 ft.
Lone Star Gas Co.'s No. 3 Burcham, C NE SE, Sec. 91, Blk. 17, H.&G.N. Sur. ..... Rig.
Martin & Dubois' No. 1 Otis Sasher, C SW SE, Sec. 69, Blk. 17, H.&G.N. Sur. ..... Set 10-in. csg; T.D. 1,240 ft.
Upham Gas Co.'s No. 3 Gooch, C SW SW, Sec. 81, Blk. 23 ..... Drlg. 350 ft.
Upham Gas Co.'s No. 1 Shelton, C SE NE, Sec. 22, Blk. 24, H.&G.N.R.R. Sur. ..... Rig.
Vaughn et ais' No. 1 Ackley, 330 ft. from N, 330 ft. from W. Sec. 4, Blk. 27, H.&G.N. Sur. ..... Building rig.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 71)

Gulf Prod. Co.'s No. 7 Waddell, Sec. 10, Blk. B-23, 2,640 ft. from S, 330 ft. from W ..... Top salt 1,108 ft.; slight show gas 2,285 ft.; 1,000,000 ft. gas at 3,065 ft.; top lime 2,972 ft.; shut down 3,610 ft.; 500 ft. water; to test 3,567 ft.
Humble Oil & Ref. Co.'s No. 1-D University, 2,310 ft. from N and 1,650 ft. from W Sec. 34, Blk. 30 ..... Drlg. 1,000 ft.
Prairie Oil & Gas Co.'s No. 7 University, 330 ft. from N, 330 ft. from W Sec. 39, Blk. 30 ..... Location.
Prairie Oil & Gas Co.'s No. 8 University, 330 ft. from S, 330 ft. from W Sec. 39, Blk. 30 ..... Drlg. 1,115 ft.
T. P. Coal & Oil Co.'s No. 2 University, 2,310 ft. from S, 1,650 ft. from W Sec. 34, Blk. 30, University Land.. Location.
Tidal Oil Co.'s No. 9 University-I, 1,320 ft. from E, 771 ft. from S Sec. 43, Blk. 30 ..... Top salt 1,140 ft.; fishing 2,520 ft.
Church-Weekly's No. 3 Dowell-University, 990 ft. from S and W Sec. 39, Blk. 30 ..... Drlg. 1,185 ft.
Warner-Quinlan's No. 4 Dowell-University, 990 ft. from S, 1,650 ft. from W Sec. 39, Blk. 30 ..... Drlg. 320 ft.
Warner-Quinlan's No. 5 University-Davis, 2,310 ft. from S and W Sec. 39, Blk. 30 ..... Rig.

CROCKETT COUNTY

Eppenaur et al's No. 2 Noelke, 500 ft. N and 1,250 ft. E of SE cor. Sec. 64, Blk. 1, I.&G.N.R.R. Sur. ..... Shut down 650 ft.
Lewis & Daniels' No. 1 Pecos River Bed, 19 yards S and 37 degrees E of NW cor. Sec. 33, Blk. 1, I.&G.N. Sur... Shut down 1,135 ft.
W. W. Donnelly & Young's No. 1 Shannon, SW SW SE Sec. 42, Blk. BB, T.C.R.A. Sur. ..... Shut down 910 ft.
W. W. Donnelly & Young's No. 1 Middlebuster, C Sec. 11, Blk. 9, D.&S.E. Sur. ..... 7,000,000 ft. gas at 1,662 ft.; shut down 1,755 ft.
Moncrief's No. 1 Andrews, 1,320 ft. from S, 1,170 ft. from W of Sec. 57, Blk. UV, G.C.&S.L.R.R. ..... Drlg. 410 ft.
W. A. Moncrief et al's No. 1 Massie, 1,170 ft. N and 1,320 ft. E of SW cor. Sec. 47, Blk. UV, G.C.&S.F. Sur. ..... 3,000,000 ft. gas 1,198 ft.; shut down 1,426 ft.; top pay 1,417 ft.; swabbed 30 bbls. oil.
Moncrief's No. 3 Todd, 330 ft. from S and E Sec. 29, Blk. VV ..... Location.
Taylor-Link's No. 3 Powell, 1,000 ft. S of No. 2, Sec. 52, Blk. BB, E.L.&R.R. Sur. ..... Rigging up.

CULBERSON COUNTY

Deep Rock Oil Co.'s No. 3 Kloh, 330 ft. N and 1,388 ft. W Sec. 39, Blk. 59 ..... Moving in material.
Hickey & Stiver's No. 1 C. O. Finley, 600 ft. N and 1,980 ft. W Sec. 20, Blk. 82 ..... Small oil show 1,231 ft.; shut down 2,275 ft.; hole full water; elevation 3,874 ft.
West Coast Oil & Exploration Co.'s No. 1 McGregor, C NW Sec. 14, Blk. 81 ..... Total depth 720 ft.; straightening crooked hole.
Scott & Dittman's No. 1 Miller, 1,160 ft. N and 2,480 ft. E Sec. 1, Blk. 97, Public School Land ..... Rainbow 1,056 ft.; 300 ft. sulphur water 1,725 ft.; oil show 2,528 ft.; hole full sulphur water; shut down 2,540 ft.; oil show 2,526 ft.; pulled 6-in. casing.

ECTOR COUNTY

Anderson's No. 1 fee, 1,320 ft. E along N line Sec. 19, and 150 ft. N at right angles with line Sec. 18, Blk. B-16, Public School Land ..... Location.

EL PASO COUNTY

Sillex's No. 1 Malone, 2,200 ft. SW and NW Sec. 46, J. M. Day Sur. ..... Shut down 1,010 ft.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlow, Sec. 60, V-8, J. C. Clift Sur. ..... Shut down 2,395 ft.

FISHER COUNTY

Bickerstaff et al's No. 1 McWhirter, 2,640 ft. E and 150 ft. N of SW cor. of Sec. 295, Blk. 2, H.&T.C. Sur. ... Shut down 3,000 ft. for orders.
Cranfill & Reynolds' No. 1 Flanagan, 990 ft. from S and W of Sec. 200, Blk. 1, B.B.B.&C. Sur. ..... Drlg. 1,150 ft.
Magnolia Pet. Co.'s No. 1 Lee, Sec. 357, 2,310 ft. from N and 4,286 ft. from W ..... Drlg. 1,800 ft.
Mesa Oil Co.'s No. 1 Griffin, 849 ft. N and 465 ft. E of NE cor. Sec. 20, School Land ..... Shut down 2,985 ft.
Midwest Oil Co.'s No. 1 Steele, 660 ft. from S, 440 ft. from W Sec. 210, Blk. 1 ..... Location.
Roeser & Pendleton's No. 1 Johnson, 330 ft. from N, 3,870 ft. from W Sec. 71, Blk. 1, H.&T.C. ..... Drlg. 1,860 ft.
Roeser & Pendleton's No. 2 Haught, Sec. 191, Blk. 1, 590 ft. from N and 1,320 ft. from W ..... Drlg. 1,860 ft.
The Texas Company's No. 2 Stephens, 330 ft. from N and W of S half SW Sec. 79, Blk. 1, H.&T.C.R.R. Sur. ..... Rigging up.

GARZA COUNTY

Bell Thompson's No. 1 Tuffing, 330 ft. from S, 2,310 ft. from E Sec. 10, Blk. 6, H.&G.N. ..... Location.
Emerald Oil Co.'s No. 1 J. C. Bargsley, 2,310 ft. from E and 330 ft. N of SW cor. Sec. 135, Blk. 5, H.&G.N... Drlg. 1,210 ft.
Gulf Prod. Co.'s No. 1 Street, C Sec. 7, Blk. 3, E.&G.N. R.R. Sur. ..... Drlg. 2,570 ft.

GLASSCOCK COUNTY

A. & F. Oil Co.'s No. 1 Turner, 2,310 ft. from N and 330 ft. from E Sec. 19, Blk. 33, Twp. 2s, T.&P. Sur. ..... Drlg. 2,370 ft.
California Co.'s No. 1 Turner, 2,310 ft. from N and E Sec. 46, Blk. 33, Twp. 2s ..... Rigging up.
Chas. Daniel et al's No. 1 Meek, 2,310 ft. W and 1,600 ft. N of SE cor. Sec. 7, Blk. 34, Twp. 3s, T.&P. Sur... Shut down 500 ft.
Gibson-Johnson's No. 1 Dean, 1,320 ft. S and E of NW cor. Sec. 2, Blk. 33, Twp. 2s, T.P.R.R. Sur. ..... Top salt 1,075 ft.; top lime 2,560 ft.; drlg. 3,150 ft.
Houston Oil Co.'s No. 1 McDowell, 330 ft. from N and 2,310 ft. from E Sec. 30, Blk. 33, Twp. 2s ..... Drlg. 1,965 ft.
Kirby Pet. Co.'s No. 1 Phillips, Sec. 23, Blk. 33, Twp. 2s, 330 ft. from N and 2,310 ft. from W..... Shut down 845 ft.
Lion Oil & Ref. Co.'s No. 1 Coffee, 330 ft. from N and E Sec. 22, Blk. 33, Twp. 2s, T.&P.R.R. Sur. ..... Location.
Midwest Oil Co.'s No. 1 Edwards, 330 ft. from S, 2,259 ft. from E Sec. 20, Blk. 34, T.&P.R.R. Sur. ..... Drlg. 412 ft.
Penn Oil Co.'s No. 1 Schaffer, 1,320 ft. from S, 2,640 ft. from E Sec. 4, Blk. 32, Twp. 3s, T.P.R.R. Sur. ..... Drlg. 705 ft.
Texas State Oil Co.'s No. 1 Coffey, 330 ft. from S and 990 ft. from E Sec. 19, Blk. 34, Twp. 2s ..... Drlg. 1,850 ft.
World Oil Co.'s No. 2-C McDowell, Sec. 21, Blk. 34, Twp. 2s, 990 ft. from N, 2,310 ft. from W ..... Building rig.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood, 320 ft. from N and W. line, League 7, Wilbarger County School Land ..... Drlg. 2,132 ft.

HOWARD COUNTY

Amerada Pet. Corp.'s No. 11 Roberts, 650 ft. from N and 200 ft. from E Sec. 128, Blk. 29, W.&N.W.R.R. Sur... Drlg. 1,360 ft.
Amerada Pet. Corp.'s No. 2 Stewart, 330 ft. from S, 990 ft. from E Sec. 130, Blk. 29, W.&N.W.R.R. Sur. ..... Drlg. 605 ft.
California Co.'s No. 7 Roberts, 874 ft. S, 990 ft. E Sec. 137, Blk. 29, W.&N.W.R.R. Sur. ..... Drlg. 1,375 ft.
O. Chalk's No. 4 fee, 1,650 ft. S and W of Sec. 124, Blk. 29, W.&N.W.R.R. Sur. ..... Drlg. 860 ft.
Cranfill & Reynolds' No. 2 Abrams, 245 ft. from W, 660 ft. N of No. 1 Sec. 3, Blk. 32, Twp. 2s ..... Spudding.
Cosden Oil Co.'s No. 5 Roberts-A, Sec. 129, Blk. 29, 200 ft. from S and 2,440 ft. from E ..... Drlg. 1,300 ft.
F. H. E. Oil Co.'s No. 11-B Dora Roberts, 1,700 ft. S and 2,310 ft. E of NW cor. Sec. 137, Blk. 29, W.&N.W. Sur. ..... Fishing 2,515 ft.
Fuhrman Pet. Co.'s No. 1 Read, 2,310 ft. N and 330 ft. E of SW cor. Sec. 41, Blk. 32, Twp. 1n, T.&P.R.R. Sur... Drlg. 550 ft.
Gibson & Johnson's No. 1 Read, 660 ft. N and W of SE cor. Sec. 47, Blk. 30, Twp. 1n, T.&P.R.R. Sur. ..... Top pay 2,703-08 ft.; total depth 2,949 ft.; 1,500 ft. oil in hole; plugged back 2,730 ft.; cleaning out.
Gulf Prod. Co.'s No. 6 Clay, 1,170 ft. from N and 150 ft. from W Sec. 155, Blk. 29, W.&N.W.R.R. Sur. .... Shut down 1,596 ft.
Howard Oil Corp.'s No. 2 Kloh et al, 990 ft. from S and E of NW Sec. 5, Blk. 32, Twp. 2s ..... Cleaning out 2,330 ft.
Howard Oil Corp.'s No. 3 Abrams, 990 ft. from N and 330 ft. from W of Sec. 5, Blk. 32, Twp. 2s, T.&P. R.R. Sur. ..... Rigging up.
Laurel Oil & Gas and Cosden Oil Co.'s No. 11 Roberts, 2,490 ft. N and 450 ft. W of SE cor. Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ..... Location.
Magnolia Pet. Co.'s No. 13 Dora Roberts, 2,440 ft. N and 1,650 ft. E of SW cor. Sec. 136, Blk. 29, W.&N.W. Sur. ..... Shut down 2,927 ft.
Mariand Prod. Co.'s No. 2 Clay-F, 250 ft. S and 660 ft. W of NE cor. Sec. 138, Blk. 129, W.&N.W.R.R. Sur... Shut down 2,675 ft. with show oil 2,595-2,675 ft.
McGinley & Seigler's No. 1 Barnett, 330 ft. S and E of NW cor. Sec. 928, Blk. 29, W.&N.W.R.R. Sur. ..... Fishing 1,328 ft.
McGinley et al's No. 2 Hyman, Sec. 92, Blk. 29, W.& N.W.R.R. Sur. ..... Rigging up.
Merriwether's No. 1 Smith, 150 ft. from S, 2,490 ft. from W Sec. 45, Blk. 33 ..... Shut down 425 ft.

Merrick & Lamb's No. 8 Clay, 1,120 ft. from S, 1,100 ft. from E line of Sec. 126, Blk. 29, W.&N.W.R.R. Sur. — Drlg. 1,310 ft.
Moody Oil Co.'s No. 16-B, 990 ft. from N, 330 ft. from W Sec. 137, Blk. 29, T.&P. — Location.
Moody Oil Co.'s No. 17-B, Sec. 137, Blk. 29, 1,650 ft. from N, 330 ft. from W, W.&N.W.R.R. — Location.
Moody Oil Co.'s No. 23-B, 990 ft. from N and W of Sec. 137, Blk. 29 — Location.
Moody Oil Co.'s No. 15-E Roberts, 990 ft. from N and 330 ft. from E Sec. 136, Blk. 29 — Drlg. 1,255 ft.
Moody Oil Co.'s No. 19-E Roberts, 190 ft. from N and 2,310 ft. from E Sec. 136, Blk. 29 — Location.
Owen & Sloan's No. 13 Roberts, 1,700 ft. from S and 330 ft. from E Sec. 136, Blk. 29, W.&N.W. — Location.
Owen & Sloan's No. 14 Roberts, 1,500 ft. from S, 330 ft. from E Sec. 136, Blk. 29, W.&N.W. — Location.
Plymouth Oil Co.'s No. 4 Abrams, 330 ft. from N and 1,650 ft. from W Sec. 5, Blk. 32, Twp. 2s — Rigging up.
Pure Oil Co.'s No. 1 Scrivner, 990 ft. E, 330 ft. N of SW Sec. 4, Blk. 32, Twp. 2s, T.&P.R.R. Sur. — Shut down 2,295 ft.
Shell Pet. Corp.'s No. 1-B Settles, 1,650 ft. from S, 2,310 ft. from W Sec. 135, Blk. 29, W.&N.W.R.R. Sur. — Location.
Shell Pet. Corp.'s No. 1 Kloh-Rumsey, 2,310 ft. from S and 330 ft. from E Sec. 13, Blk. 33, Twp. 2s, T.&P.R.R. Sur. — Location.
Simms Oil Co.'s No. 1 Clay, 330 ft. from S, 2,310 ft. from W Sec. 127, Blk. 29 — Rigging up.
Superior Oil Co.'s No. 14 Dora Roberts-B, 2,310 ft. E and 330 ft. S of NW cor. Sec. 137, Blk. 29, W.&N.W. Sur. — Shut down 2,601 ft.
Superior Oil Co.'s No. 15 Dora Roberts-B, 2,310 ft. S and 330 ft. E of NW cor. Sec. 137, Blk. 29, W.&N.W. R.R. Sur. — Drlg. 2,585 ft.
Ward Oil Co.'s No. 7 Roberts, 2,310 ft. N and 330 ft. E of SW cor. Sec. 137, Blk. 29, W.&N.W.R.R Sur. — Shut down 2,645 ft.; top pay 2,563 ft.; fishing.

HUDSPETH COUNTY

Western States Oil Co.'s No. 1 Lockhart & Roseborough, C SE Sec. 5, School Blk. 21 — Drlg. 1,603 ft., black lime.
California Co.'s No. 1 University, 3,821 ft. N and 3,554 ft. E of SW cor. Sec. 19, Blk. E — Total depth 1,640 ft.; estimated 1,000 bbls. fresh water daily.
George Richardson's No. 1 Faxton, 2,640 ft. from N and W Sec. 9, Blk. 16 — Rigging up standard tools and shut down.
Western States Oil Co.'s No. 1 Moore, C SE Sec. 16, Blk. 71, Twp. 4, T.&P. Sur. — Shut down 2,685 ft.; fishing job.
Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW Sec. 12, Blk. 18 — Shut down 3,140 ft.; fishing.

IRION COUNTY

Baker & Hodges' No. 1 Tankersley, 1,320 ft. from S, 150 ft. from W Sec. 23, G.C.&S.F. — Location.
Crawford Oil Co.'s No. 1 Williams, 450 ft. from N, 150 ft. from W Subd. 8 — Spudded and shut down.
Kimbrough & Flinchbaugh's No. 1 Tankersley, 160 ft. S and 200 ft. W of NE cor. Sec. 712, Ford Willig Sur. — Show oil 1,318-29 ft.; total depth 1,335 ft.; pumped 103 bbls. in 13½ hrs., 37 degrees gravity oil.
Pecos Valley Oil Co.'s No. 2 Stocks, Sec. 19, Blk. 3, 1,020 ft. from S and W, H.&T.C. Sur. — Fishing 1,200 ft.
Webb's No. 2 Nutt, 200 ft. from N and 711 ft. from E Subd. 5 — Rig.
Kingwood Oil Co. et al's No. 1 J. D. Suggs, SE NW SE Sec. 19, Blk. 7, H.&T.C. Sur. — Drlg. 7,288 ft.
Whitmer et al's No. 1 Meyers, 990 ft. from S and E Sec. 10, Blk. 17, H.&T.C.R.R. — Drlg. 1,496 ft.
P. H. Williams' No. 1 Ash, C of Sec. 20, Washington County — Total depth 3,535 ft.

JEFF DAVIS COUNTY

J. K. Hughes Dev. Co.'s No. 2 Means, 1,622 ft. N line, 600 ft. W line Sec. 345, H.&T.C. Sur. — Show gas 3,271 ft.; fresh water 3,000-05 ft.; underreaming 5 3/16-in. casing; shut down 4,005 ft.; 600 ft. fresh water 4,000-26 ft.

JONES COUNTY

J. H. Adsit et al's No. 1 Swenson, C of NE of SE Sec. 193, B.B.B.&C. Sur. — Drlg. 1,360 ft.
Cosden & Herbert Oil Co.'s No. 1 Bickley, 320 ft. N and 310 ft. E of SW cor. S half NW Sec. 50, Blk. 18, T.&P. Sur. — Drlg. 1,240 ft.
Cosden-Herbert et al's No. 3 Bickley, 330 ft. N and W of SE cor. of S half NW Sec. 50, Blk. 18 — Spudded.
W. G. Clark et al's No. 1 Collins, 330 ft. S and E of NW cor. Sec. 29, Blk. 18, T.&P.R.R. Sur. — Drlg. 300 ft.
Humble Oil & Ref. Co.'s No. 2 Bickley, 330 ft. S and W of NE cor. of SW Sec. 50, Blk. 18, T.&P.R.R. Sur. — Drlg. 1,000 ft.
McGinley Corp.'s No. 1 Whittemore, 660 ft. N and W of SE cor. SE NE Sec. 39, B.B.B.&C. — Shut down 2,621 ft.
McNeeley et al's No. 1 Roscoe Bland, 1,175 ft. N and 240 ft. W of SE cor. Subdivision 20, A-164, DeWitt Co. School Land — Spudded and shut down.
Phillips Pet. Corp.'s No. 2 M. C. Lan, 990 ft. from N and W line Sec. 15, Blk. 19, T.P.R.R. Sur. — Drlg. 1,700 ft.
Sedgwick Oil & Gas Co.'s No. 1 Brown, 660 ft. N and 1,320 ft. E of SW cor. Sec. 9, Blk. 1, T.&N.O. Sur. — Location.
Texas Pacific Coal & Oil Co.'s No. 1 Smith, 1,822 ft. S and 2,043 ft. E of SW cor. Sec. 51, Blk. 18, T.&P. — Drlg. 800 ft.
The Texas Company's No. 2 Camp, 2,829 ft. N and 323 ft. W of SE cor. Camp. 189.5-acre lease, Sec. 13, T.&P. Sur., Blk. 19 — Mudding off water at 2,325 ft.
The Texas Company's No. 3 Camp, 1,189 ft. S and 326 ft. W of NE cor. of Sec. 13, Blk. 19, T.&P. — Shut down 2,545 ft.
U. L. Tomberlin's No. 1 Horn, 1,980 ft. N and 600 ft. E of SW cor. of 502 ac. of Penney Sur. A-283 — Shut down 2,735 ft.
White Eagle Oil & Ref. Co.'s No. 1 W. B. Teague, 933 ft. N and W of SE cor. Sec. 30, Austin & Williams Sur. No. 339 — Underreaming at 2,630 ft.

KIMBLE COUNTY

C. L. Bryant and others' No. 1 Lambert, 700 ft. from N and W line of F. Lotta Sur. — Drlg. 150 ft.
Lindsay Bros.' No. 1 Anderson, Sec. 167, 1,320 ft. from N and E — Drlg. 785 ft.
McLean & Jamison's No. 1 Cannon, 1,940 ft. N and 300 ft. W of SE cor. Robert Cochran Sur. — Shut down 995 ft.

LOVING COUNTY

Lockhart & Co.'s No. 2 Bowen-Wells, 990 ft. NW and 330 ft. SE Sec. 92, Blk. 1, W.&N.W.R.R. Sur. — Top salt 725 ft.; drlg. 2,515 ft.
Lockhart & Co.'s No. 1 Hayzell, 2,792 ft. SW of NE line and 660 ft. NW of SE line Sec. 84, Blk. 33, H.&T.C. R.R. Sur. — Top salt 700 ft.; drlg. 3,260 ft.
Lockhart & Co.'s No. 1 Johnson, 660 ft. S and 1,980 ft. W of NE cor. Sec. 20, Blk. 56, Twp. 1, T.&P.R.R. Sur. — Top salt 1,110 ft.; shut down 3,328 ft.; hole full water 3,310-28 ft.
Lockhart & Co.'s No. 1 Wheat-H, 990 ft. from NE and SE lines Sec. 85, Blk. 33, H.&T.C.R.R. Sur. — Top salt 720 ft.; set 8¼-in. casing 2,295 ft.; show oil 4,147 ft.; swabs 10 bbls. per day; total depth 4,197 ft.; shot 110 quarts 4,150-80 ft.; flowing 2 bbls. salt water hourly; averaging 10 bbls. oil per day on swab.

LYNN COUNTY

George McCamey's No. 1 Edwards, 165 ft. N and E Sec. 5, Blk. 2, L.S.&W. Sur. — Top salt 2,140 ft.; oil show 1,580-90 ft.; cem. 8¼-in. casing 2,500 ft.; shut down 3,580 ft.

MENARD COUNTY

Cromwell & Duffey's No. 1 Winslow, C SE Sec. 32, T.&N.O. Sur. — Fishing 1,725 ft.

MIDLAND COUNTY

Phillips Pet. Corp.'s No. 1 Stokes, 440 ft. S and W of NE cor. S. Beall Sur. No. 101, Blk. 37, Twp. 2s, T.P.R.R. Sur. — Top salt 1,610 ft.; top lime 3,720 ft.; fishing 3,915 ft.; 1,500 ft. fluid in hole; total depth 4,260 ft.; run 6-in. casing; 2,000 ft. salt water in hole 4,200 ft.; straightreaming and cleaning out 3,650 ft.
Shoupe et al's No. 1 Roy Parks, 1,320 ft. N and W Sec. 34, Blk. 41 — Top lime 4,744 ft.; shut down 4,980 ft.; to deepen.

MITCHELL COUNTY

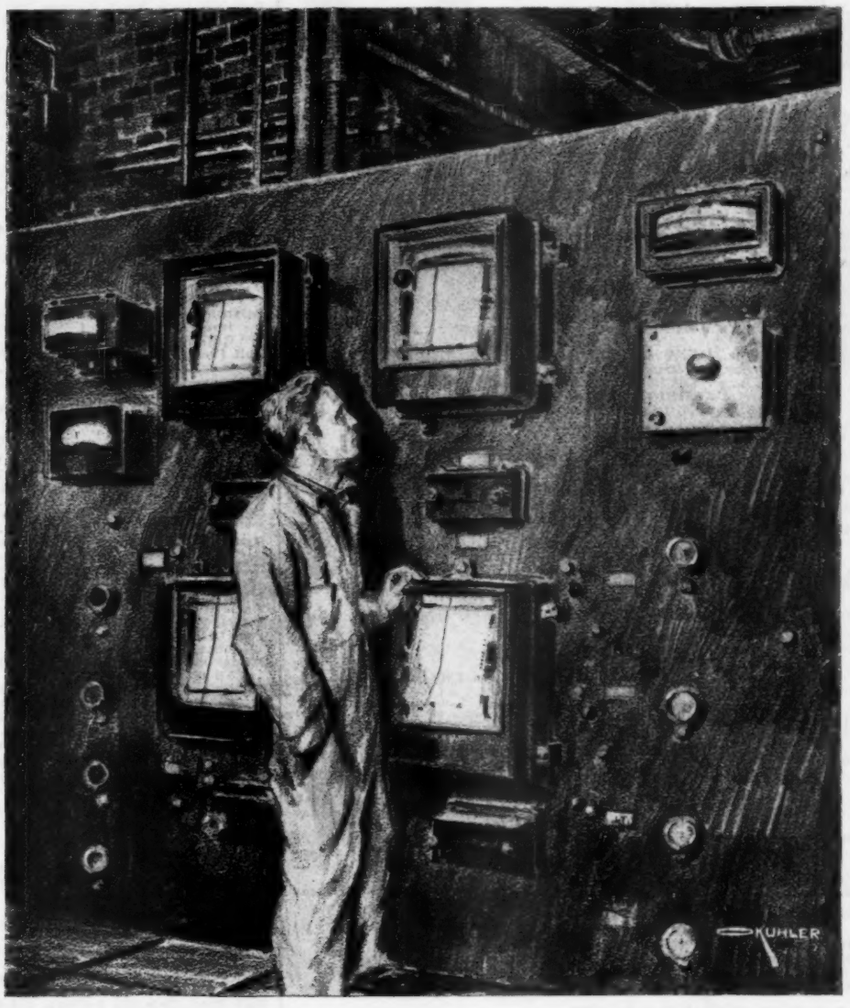
California Co.'s No. 7 Foster, Lease No. 1, Sec. 6, Blk. 29, Twp. 1s, T.P.R.R. — Drlg. 2,100 ft.; set 8-in. casing 1,632 ft.
California Co.'s No. 1 Handley, 2,310 ft. from S, 1,650 ft. from E Sec. 1, Blk. 28, Twp. 1n, T.&P. Sur. — Drlg. 2,465 ft.
Seiger's No. 1 Scott, C of NE of SW Sec. 36, Blk. 17, S.P.R.R. Sur. — Shut down 730 ft.
Republic Prod. Co.'s No. 1 Scott, 330 ft. N and E of SW Sec. 20, Blk. 17, S.P.R.R. Co. — Drlg. 2,575 ft.
Simms Pet. Co.'s No. 1 Elwood, C SE of Sec. 39, Blk. 18, S.P.R.R. Sur. — Set 5-in. casing 4,427 ft.; drlg. 4,525 ft.
Teas & Wheeler's No. 1 Radford, 1,320 ft. N and W of Sec. 1, Blk. 27, T.&P. Sur. — Fishing 4,052 ft.
Westyde Investment Co.'s No. 1 Elwood, C SW Sec. 38, Blk. 16, S.P.R.R. Sur. — Top lime 1,290 ft.; drlg. 2,420 ft.

NOLAN COUNTY

L. G. Bradstreet et al's No. 1 Kuteman, C NW Sec. 95, Blk. X, T.&P. Sur. — 2,500 ft. water in hole; drlg. 3,415 ft.
Phillips Pet. Co.'s No. 1 Plunkett, 330 ft. N and W of SE cor. NW Sec. 66, Blk. 23, T.&P. Sur. — Drlg. 2,780 ft.

PECOS COUNTY

California Co.'s No. 19 Yates, Lease No. 1, Sec. 34, Blk. 194, 1,042 ft. from N and 1,919 ft. from E, G.C. &S.F. — Rig.
California Co.'s No. 20 Yates, Lease No. 1, 1,042 ft. from N, 2,591 ft. from W Sec. 34, Blk. 194, G.C. &S.F. — Rigging up.
Cosby's No. 2 Smith, Sec. 24, Blk. 194, 1,650 ft. from N, 330 ft. from E, G.C.&S.F.R.R. Sur. — Shut down 673 ft.
Cowboy Evans' No. 1 Pecos Valley, 2,310 ft. from NW line, 990 ft. from SW line of Sec. 36, Blk. 3, H.&T.C. R.R. Sur. — Shut down 700 ft.
Crowley's No. 1 Heiner, 2,400 ft. each way from N and E lines Sec. 589, G.C.&S.F.R.R. Sur. — Shut down 1,288 ft.
Clayton Williams' No. 1 Sanford, 160 ft. from NW line, 1,150 ft. from SW line Sec. 55, Blk. 10, H.&G.N. — Drlg. 1,145 ft.
Gibson-Johnson's No. 1 Grace, 330 ft. N, 990 ft. from E Sec. 3, Blk. 179 — Drlg. 960 ft.
Humble Oil & Ref. Co.'s No. 7-B Yates, 275 ft. from S, 2,679 ft. from W Sec. 101, T.C.R.R. Sur. — Rig.
Independent Oil & Gas Co.'s No. 1 Iowa Realty Trust Co., 2,310 ft. each way NE SE line Sec. 23, Blk. 10, H.&G.N.R.R. — Drlg. 1,315 ft.
Jayhawk Oil Co.'s No. 1 Price, 1,310 ft. from W, 330 ft. from S, Sec. 6, Blk. 12, H.&G.N.R.R. Sur. — Spudding.
J. L. Kennedy's No. 1 Roberts, C of Sec. 78, Blk. 3, T.&P.R.R. Sur. — Location.
Sam Kitts and others' No. 1 Sherbino, 330 ft. from N and 990 ft. from W line Sec. 52, Blk. C-4, G.C.&S.F. R.R. — Shut down 1,010 ft.
Landreth Prod. Co.'s No. 1 University, Sec. 13, Blk. 18, University Land — Location.
Seminole Oil Co.'s No. 1 Pecos Valley, Sec. 22, Blk. 10, 360 ft. from SW, 2,280 ft. from SE, H.&G.N. Sur. — Location.
Marland Oil Co.'s No. 1 University, Sec. 10, Blk. 17, 1,620 ft. from N, 1,020 ft. from E — Total depth 380 ft.; skidding rig.
Matador Oil Co.'s No. 3 Smith, 2,310 ft. from N and 990 ft. from E lines, Sec. 24, Blk. 194, G.C.&S.F.R.R. Sur. — Moving in machine.
Mauch & Kroger's No. 1 Holmes, Sec. 5, Blk. 178, T.C. Sur. — Shut down 1,442 ft.
McMan Oil & Gas Co.'s No. 6 Smith, C Sec. 25, Blk. 194, 2,127 ft. from N and 1,740 ft. from W — Top pay 1,748 ft.; flowed 80 bbls.; in 10 hrs.; total depth 1,756 ft.; cleaning out.
McMan Oil & Gas Co.'s No. 7 Smith, 660 ft. from S of C line, 990 ft. from E Sec. 25, Blk. 194 — Shut down 1,635 ft.
R. E. Moore's No. 1 Arnold, 1,320 ft. from S and 660 ft. from E lines of Sec. 18, Blk. 1, H.&T.C.R.R. — Drlg. 665 ft.
W. A. Moncrief's No. 1 Sullivan, 2,310 ft. from N and W Sec. 70, Blk. 11, H.&G.N. — Location.
Moncrief et al's No. 1 Tippett, 330 ft. from S, 330 ft. E of C Sec. 36, Blk. 12, H.&G.N. — Location.
W. A. Moncrief et al's No. 2 Tippett, 330 ft. from S and E lines of W half of Sec. 36, Blk. 12, H.&G.N. R.R. Sur. — Location.
Moncrief et al's No. 1 Toborg, 330 ft. from S, 330 ft. W of C of Sec. 539, Blk. 1 — Spudded and shut down.
Moncrief et al's No. 1 University, 1,470 ft. from N and 150 ft. from E Sec. 27, Blk. 18, University Land — Moving in material.
J. D. O'Mara's No. 1 Bennett, Sec. 592, 1,460 ft. from S, 150 ft. from E, G.C.&S.F. — Location.
J. D. O'Mara's No. 1 Streety, C of Sec. 1, W. P. Howard Sur. — Location.
Perrin et al's No. 1 Eaton, 150 ft. each way from NE and NW lines Sec. 27, Blk. 39, H.&T.C. Sur. — 18,000,000 ft. gas 1,490-1,502 ft.; spraying salt water from behind 8¼-in. casing set at 1,180 ft.; shut down 1,502 ft.; 5 3/16-in. casing set on bottom with last joint perforated; 18,000,000 ft. gas shut in.
Perren's No. 1 Peterson, 150 ft. from NW, 150 ft. from SW Sec. 34, Blk. 10, H.&T.N. — Rigging up.
Phillip Pet. Corp.'s No. 1 Bowser, 250 ft. from N and E Sec. 77, Blk. OW, G.C.&S.F.R.R. — Drlg. 885 ft.
Plymouth Oil Co.'s No. 2 Perry, Sec. 29, Blk. 178, 330 ft. from N and E cor. — Set 6-in. casing; show oil and water; shut down 1,817 ft.; show oil 1,772-76 ft.; 1,200 ft. oil in hole from 1,792-96 ft.; hole fills at rate of 100 ft. per hour; total depth 1,858 ft.; plugged back; hole full oil; plugged back 1,855 ft.; standing.
Phillip Pet. Corp.'s No. 2 Monroe, 990 ft. from N and E of Sec. 39, Blk. 194, G.C.&S.F.R.R. Sur. — Drlg. 260 ft.
Phillips Pet. Co.'s No. 1 Pryor, 440 ft. S and E of NW cor. Sec. 78, Blk. OW, T.M.R.R. Sur. — Top pay 1,345 ft.; 400 ft. oil in hole; drlg. 1,985 ft.



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Phillip Pet. Corp.'s No. 2 Courtney, Sec. 78, Blk. OW, 220 ft. from N and W ..... Location.
Rio Pecos' No. 2 Yates, 5,130 ft. from E, 510 ft. from S Sec. 543, Blk. 1 ..... Shut down 1,336 ft.
Rowen & Tong's No. 1 McDonald, 1,170 ft. from N and 2,490 ft. from E Sec. 46, Blk. 2, H.&G.N. ..... Shut down 345 ft.
Seminole Oil Co.'s No. 1 Cordova, 330 ft. from S and 2,434 ft. from E line of Sec. 51, Blk. 11, H.&G.N. ... Location.
B. J. Spikes' No. 1 George Brown, 2,490 ft. SE and SW line Sec. 8, Blk. 3 ..... Show oil 1,180-90 ft.; shut down 2,257 ft.
Schumaker et al's No. 1 Williams et al, 330 ft. N of middle of S line Sec. 1, Blk. 117, G.C.&S.F. ..... Drlg. 1,365 ft.; hole full sulphur water 1,303 ft.
Shell Pet. Corp.'s No. 1-B University, 1,650 ft. from S and 330 ft. from W Sec. 30, Blk. 16, University Land.. Location.
Southern Crude O. P. Co.'s No. 1 Jackson T-139, Sec. 28, Blk. 3, 1,487 ft. from NE, 2,518 ft. from SE cor. .... Location.
Talbot and others' No. 1 Unsicker, 150 ft. each way from NE and SE cor. line of Sec. 25, Blk. 10, H.&G.N. Sur. ..... Material on ground.
Texas-Phillip's No. 1 Campbell, 1,320 ft. from SW, 330 ft. from SE. Sec. 46, Blk. 10, H.&G.N. ..... Drlg. 440 ft.
Taylor-Link's No. 2 University, 330 ft. from N and W of Sec. 31, Blk. —, University ..... Rigging up.
Tidal Oil Co.'s No. 1 University, 1,320 ft. from S and W lines of Sec. 16, Blk. 20, University Land ..... Top salt 786 ft.; top lime 1,270 ft.; drlg. 1,515 ft.
Tidal Oil Co.'s No. 2 University, 2,970 ft. from N, 2,310 ft. from E Sec. 3, Blk. 18, University Land ..... Rig.
Tidal Oil Co.'s No. 3 University, 2,310 ft. from S and 1,650 ft. from E Sec. 17, Blk. 20, University Land ... Location.
Transcontinental Oil Co.'s No. 1 University, NE NW SW Sec. 18, Blk. 18 ..... Top lime 1,155 ft.; fishing 4,312 ft.; total depth 4,407 ft.
R. D. Webb's No. 1 fee, 1,900 ft. from E and 1,420 ft. N of SW cor. Sec. 105, Blk. OW ..... Total depth 352 ft.; skidding rig.
World Oil Co.'s No. 1 Kloh, 2,310 ft. from N and W line Sec. 47, Blk. 48, Twp. 8, T.&P.R.R. Sur. ..... Drlg. by bailer 2,200 ft.
World Oil Co.'s No. 1 University, 330 ft. from N and 2,310 ft. from E of Sec. 31, Blk. 16, University Land.. Location.
World Oil Co.'s No. 1-B University, 330 ft. from N and E Sec. 13, Blk. 18 ..... Location.

PRESIDIO COUNTY

L. C. Brite's No. 4 Brite, 271 ft. from N, 1,188 ft. from E Sec. 245, Blk. 4 ..... Drlg. 480 ft.
Eastland Oil Co.'s No. 1 Tootle, C Sec. 17, Blk. 1, D.P. R.R. Sur. ..... Spudded; shut down.
Phillips Pet. Co., Empire G. & F. Co., Delmar Co. and C. E. Miller's No. 1 Tootle Est., C NE Sec. 76, Blk. 3, D.&P.R.R. Sur. ..... Slight oil show and gas at 2,707 ft.; show oil at 2,767 ft.; shut down 3,500 ft.
T. & P. Coal & Oil Co.'s No. 1 Bogel, 330 ft. S and W Sec. 83, Blk. 8, G.H.&S.A. ..... Location.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University, 2,598 ft. S and 250 ft. W of NE cor. Sec. 1, Blk. 2, University Land.. Drlg. 2,755 ft.
Kemrow Co.'s No. 1 Sawyer Cattle Co., 1,320 ft. from N and 1,980 ft. from E line Sec. 8, J. G. Robinson Sur. ..... Location.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. ..... Shut down 2,900 ft.; pipe out.
H. T. Hansford's No. 1 Williams, 150 ft. from S and W Sec. 17, Blk. 6, H.&G.N. ..... Location.
Earl Henby's No. 1 Brooks, 1,980 ft. N and 660 ft. W Sec. 16, Blk. 59 ..... Shut down 160 ft.
Southern Crude O. P. Co.'s No. 1 Kloh-Rumsey, 2,310 ft. N and W SE cor. Sec. 23, Blk. 51 ..... Hole full water 1,275 ft.; cem. 12½-in. casing 1,463 ft.; shut down 1,535 ft. for orders; pipe parted, water broke in; skidded 75 ft. west; drlg. new hole at 375 ft.
David R. Thompson's No. 1 A. A. Eddins, Sec. 9, Blk. C-1 ..... Fishing casing 5,658 ft.; underreaming 8¼-in. casing.
Lee O. White et al's No. 1 Kloh-Rumsey, 660 ft. S and E of NW cor. Sec. 5, Blk. 51, Twp. 10, T.&P. Sur. ... Cem. 10-in. casing 1,485 ft.; total depth 1,530 ft.; waiting on cement to set.

RUNNELS COUNTY

Herbert Oil Co.'s No. 1 Currie, 1,866 ft. SE of NW line, 335 ft. SW of NE line Gray Carroll Sur. ..... Shut down 2,140 ft.
Independent Oil & Gas Co.'s No. 1 Will Rollwitz, 330 ft. S and W of NE cor. S half M. Salinas Sur. No. 20½.. Drlg. 4,065 ft.; hole full salt water.
McLean et al's No. 1 G. W. Clayton, 150 ft. N line, 270 ft. from W line Sec. 135, E.T.R.R. ..... Shut down 1,185 ft.
Vacuum Oil Co.'s No. 4 McMillan, 555 ft. S and 717 ft. W of NE cor. Lot 22, Domingo Diaz Sur., No. 532 .... Location.

SCHLEICHER COUNTY

Fort McKavet's No. 1 Tisdale, Sec. 1,499, River Section, 3,630 ft. from S, 150 ft. from W ..... Set 6-in. casing 3,023 ft.; cleaning out 3,240 ft.
Interstate's No. 1 Whitten, 1,320 ft. from N and W Sec. 35, Blk. LL, T.C.R.R. Sur. ..... Shut down 3,875 ft.
Underwood's No. 1 Tisdale, 2,095 ft. N and 1,185 ft. from E Sec. 74, Blk. LL ..... Spudded and shut down.

SCURRY COUNTY

Camp Spring Oil & Ref. Co.'s No. 3 Guinn, 1,300 ft. from S, 300 ft. from E Sec. 12, Blk. 3, H.&T.C.R.R. Sur. ..... Rig.
Cottingham & Briscoe's No. 1 Trees, C SE Sec. 147, Blk. 97 ..... Moving in material.
I. B. Mimms et al's No. 1 J. J. Koonsman, Sec. 216, Blk. 2, H.&T.C. Sur. ..... Spudded and shut down 300 ft.
G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 3, H.&T.C. Sur. ..... Shut down 3,230 ft.
Texas-Canadian's No. 1 Moore, 1,320 ft. from S and W Sec. 379, Blk. 97 ..... Location.

SUTTON COUNTY

Phillips Pet. Co.'s No. 1 A. G. Holman, 2,310 ft. S and 330 ft. W NE cor. Sec. 25, G.C.S.D.&N.G.R.R. Sur. .... Fishing 6,635 ft.; making 1,500,000 ft. gas 6,635 ft.
L. G. Priest's No. 1 Allison, 1,320 ft. N and E of SW cor. Sec. 52, Blk. A, T.&P. Sur. ..... Set 15-in. casing 530 ft.; shut down 3,250 ft.

TAYLOR COUNTY

V. B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor. Sec. 46, Lunatic Asylum Land ..... Fishing 4,445 ft.
Magnolia Pet. Co.'s No. 1 Hammer ..... Drlg. 3,000 ft.
Root Drlg. Co.'s No. 1 Martin, 990 ft. E and 1,650 ft. N of SW cor. Sec. 30, Blk. 19, T.&P.R.R. Sur. ..... Drlg. 2,940 ft.

TERRELL COUNTY

Big-Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.-K.-T.R.R. Sur. ..... Drlg. 4,025 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Blk. D-7, E.L.R.R. Sur. ..... Drlg. 2,550 ft.
Mrs. J. B. McPhee's No. 1 Sam Belt, C Sec. 78, Blk. D-7, E.L.&R.R. Sur. ..... Shut down 640 ft.
Milham Exploration Co.'s No. 1 Bassett, Sec. 76, Blk. Y, W. E. Robertson Sur. ..... Cem. 6⅝-in. casing 3,986 ft.; drlg. 5,245 ft.
Woodley & Jones' No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&N.G.R.R. Sur. ..... Shut down 625 ft.

TERRY COUNTY

Kingsland O. P. Co.'s No. 1 Brownfield, C NW SW SW Sec. 7, Blk. 1-A, E.L.R.R. Sur. ..... Fishing bailer 5,030 ft.

TOM GREEN COUNTY

Cannon and others' No. 1 Rust, 990 ft. S, 990 ft. W of NE cor. of Sec. 745 ..... Rig.
Fitzgerald & Taliaferro's No. 1 Bennett, C SW Sec. 1,623, E. H. Ringer ..... Shut down 1,920 ft.

UPTON COUNTY

Dixie Oil Co.'s No. 30 Burleson, 990 ft. from N and 2,640 ft. from E Sec. 2, John Nidever ..... Rig.
Prairie Oil & Gas Co.'s No. 1 Quatters, 330 ft. from S and 1,980 ft. from W, C. C. Dewitt Sur. ..... Location.
Pure Oil Co.'s No. 1 Hughes, 150 ft. from SW, 150 ft. from N Sec. 4, William Teer Sur. ..... Rigging up.

YOAKUM COUNTY

Weekly Oil Corp.'s No. 1 Knight, C NW Sec. 791, Blk. D, John Gibson Sur. ..... Shut down 1,960 ft.

VAL VERDE COUNTY

Independent Operators' No. 1 Whitehead, SE SE Sec. 30, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 4,850 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Gas sand 2,491-2,520 ft.; tested 125,750 ft. gas; reset 8-in. 2,511 ft.; cleaning out 4,210 ft.
Producers Oil Co. et al's No. 1 Everett Bros., 2,310 ft. S and 330 ft. E of NW cor. Sec. 40, Blk. DB, C.C.S.D.&R.G.N.G. Sur. ..... Fishing 2,510 ft.
Dyar Bros. et al's No. 1 Wilson, 6,630 ft. N NE cor. Sec. 1, T.&P. Sur., thence 1,650 ft. E Sec. 115, Blk. E, G.C.&S.F. Sur. ..... Set 6-in. casing 2,920 ft.
Valvert Oil Corp.'s No. 1 Bassett, C NE Sur. 47, Blk. Y .. Set 15½-in. casing 767 ft.; set 10-in. casing 1,510 ft.; shut down 3,900 ft.

WARD COUNTY

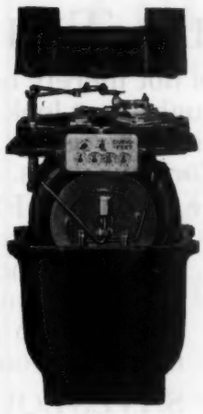
Atlantic & Delmar's No. 3 Hayzlett, 150 ft. each way from E cor. of S of W of Sec. 17, Blk. 6, H.&T.C. R.R. Sur. ..... Top salt 727 ft.; drlg. 940 ft.
Gulf Prod. Co.'s No. 2 Hutchins, 330 ft. N and E Sec. 7, Blk. O ..... Top salt 1,240 ft.; top pay 2,529 ft.; 2,000,000 ft. gas; rebuilding rig; total depth 2,529 ft.
Barstow Oil & Gas Co.'s No. 1 Monroe, Sec. 50, Blk. 33.. Spudded and shut down.
Gulf Prod. Co.'s No. 5 O'Brien, 330 ft. each way NW of SW Sec. 18, Blk. F, G.M.M.B.&A. Sur. ..... Top salt 1,273 ft.; top pay 2,595 ft.; flowing 130 bbls. daily.
Gulf Prod. Co.'s No. 6 O'Brien, 2,310 ft. from N, 330 ft. from E Sec. 20, Blk. F, G.M.M.B.&A. Sur. ..... Building rig.
Gulf Prod. Co.'s No. 1 Wristen, 216 ft. NW, 1,107 ft. SE Sec. 18, Blk. 5 ..... Drlg. 2,190 ft.; top salt 720 ft.
Gulf Prod. Co.'s No. 2 Wristen, 220 ft. NW, 1,470 ft. SW Sec. 18, Blk. 5, H.&T.C. ..... Drlg. 725 ft.
Kemper-Kimberlin's No. 1 Thompson, 1,470 ft. NE, 150 ft. NW Sec. 15, Blk. 5 ..... Location.
E. B. Lovelace et al's No. 1 Redman, 1,980 ft. NE of SW line and 1,980 ft. SE of NW line, Sec. 162, Blk. 34, H.&T.C.R.R. ..... Drlg. 510 ft.
Marland Oil Co.'s No. 1 Sealey, 330 ft. S and W of Sec. 81, Blk. A, G.M.M.B.&A. ..... Location.
Penn & Atlantic's No. 1 Pecos Mercantile Co., Sec. 16, Blk. 34 ..... Shut down 202 ft.
Ramsower and others' No. 1 Boogher, 1,980 ft. NE and SE of Sec. 11, Blk. 5, H.&T.C. ..... Moving machinery.
Shipley's No. 2 Hayzlett, 220 ft. SE and 1,570 ft. SW Sec. 17, Blk. 5, H.&T.C.R.R. Sur. ..... Top salt 795 ft.; drlg. 1,495 ft.
Shipley et al's No. 1 Monroe, 330 ft. SE SW Sec. 3, Blk. 1 ..... Location.

WINKLER COUNTY

American Maracaibo Co.'s No. 2 Hendricks-B, 1,980 ft. N and 1,650 ft. E of SW cor. Sec. 28, Blk. B-5 ..... Cem. 12½-in. casing 170 ft.; top lime 2,599 ft.; top pay 2,731 ft.; 2,000 ft. oil; increase 2,875 ft.; show water 3,928-31 ft.; running 6-in. casing 2,945 ft.; drlg. 3,245 ft.; flowing 210 bbls. fluid daily.
V. T. Bolin's No. 2 Brown et al, 2,000 ft. S and W of NE Sec. 4, Blk. B-5, Public School Land ..... Top salt 1,300 ft.; shut down 2,420 ft.; cem. 8¼-in. casing 2,420 ft.
Cranfill & Pickrell's No. 2 Hutchins, 2,310 ft. S and W Sec. 47, Blk. 26 ..... Location.
Flandell Oil Co.'s No. 1 Carter, 640 ft. N, 2,230 ft. E of SW cor. Sec. 26, Blk. B-3 ..... Location.
Gulf Prod. Co.'s No. 2-B Lum Daugherty, 2,310 ft. from N and 1,320 ft. W Sec. 22, Blk. 26, P.S.L. ..... Location.
Gulf Prod. Co.'s No. 1 Clapp, 330 ft. S and W Sec. 37, Blk. 26 ..... Top lime 2,297 ft.; cem. 8¼-in. casing 2,302 ft.; drlg. 2,488 ft.
Gulf Prod. Co.'s No. 3 Hendricks, 330 ft. from N and 310 ft. W Sec. 44, Blk. 26, Public School Land ..... Top salt 1,961 ft.; set 12½-in. casing 664 ft.; drlg. 2,275 ft.
Humble Oil & Ref. Co.'s No. 13-C Hendricks, 440 ft. from S, 330 ft. from W Sec. 10, Blk. B-12 ..... Rigging up rotary.
Kermit Dev. Co.'s No. 1 Carter, 640 ft. S, 2,227 ft. W Sec. 27, Blk. B-3 ..... Shut down 400 ft. to cure title.
Liner Drlg. Co.'s No. 1 Campbell, 330 ft. from N and E cor. Sec. 2, Blk. B-5 ..... Drlg. 932 ft.
Magnolia Pet. Co.'s No. 2 Scarborough, 1,620 ft. N and 990 ft. W SE cor. Sec. 1, Blk. C-22 ..... Top salt 1,125 ft.; gas show 2,825 ft.; fishing 2,825 ft.; running 8¼-in. casing 2,825 ft.; drlg. 2,925 ft.; 500 ft. oil in hole.
Marland Oil Co.'s No. 1 Morton-A, 330 ft. N and E of Sec. 16, Blk. B-12 ..... Cem. 12-in. casing 409 ft.
Shell-Llano Oil Co.'s No. 7 Scarborough, 1,020 ft. from N and W Sec. 2, Blk. 77 ..... Building rig.
Skelly Oil Co.'s No. 3 Daugherty, 330 ft. W, 1,650 ft. S Sec. 22, Blk. 26, Public School Land ..... Drlg. 1,400 ft.
Skelly Oil Co.'s No. 4 Daugherty, 990 ft. S, 330 ft. W Sec. 22, Blk. 26 ..... Top lime 2,476 ft.; cementing 8-in. casing 2,484 ft.
Skelly Oil Co.'s No. 5 Daugherty, 1,326 ft. W, 2,310 ft. S Sec. 22, Blk. 26 ..... Location.
Southern Crude O. P. Co.'s No. 4 Hendricks T-88-CX, 1,375 ft. N, 330 ft. E Sec. 21, Blk. 26 ..... Drlg. 610 ft.
Southern Crude O. P. Co.'s No. 5 Hendricks T-67-2-D, 990 ft. from W, 2,310 ft. from S, Sec. 28, Blk. 26.... Top lime 2,593 ft.; cem. 8¼-in. casing 2,605 ft.; fishing tools 2,840 ft.
Southern Crude O. P. Co.'s No. 6 Hendricks T-88-N, 1,320 ft. N and W of SE cor. Sec. 28, Blk. 26, School Land ..... Top lime 2,420 ft.; total depth 2,829 ft.; plugged back 2,106 ft.; drlg. out cement.
Southern Crude O. P. Co.'s No. 3 Hendricks T-88-R, 1,320 ft. N and E of SW Sec. 27, Blk. 26 ..... Top lime 2,365 ft.; gas show 2,630 ft.; top pay 2,655 ft.; flowing 20 bbls. hourly; drlg. 2,801 ft.
Southern Crude O. P. Co.'s No. 4 Hendricks T-90, 2,310 ft. S and E of Sec. 47, Blk. 26 ..... Location.
Texas Canadian Oil Co.'s No. 1 Kloh-Rumsey, 1,320 ft. N and E of SW cor. Sec. 35, Blk. 46, T.&P.R.R. Sur.. Shut down 4,011 ft. for orders.
Tidal Oil Co.'s No. 1 Scarborough, 330 ft. S and E of NW SE SE Sec. 1, Blk. C-22 ..... Cem. 6-in. casing 2,921 ft.; rigging up standard tools; top pay 2,945-50 ft.; 200 bbls. daily; total depth 3,056 ft.

Indestructible Meter Construction

EMCO No. 0
and
IRONCLAD



A cast iron case—fireproof; knocks and excessive heat can't damage it; non-corrosive and rust-proof.

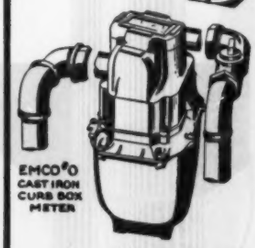
Valves that cannot tilt and wear unevenly; they are larger and more perfectly proportioned, which means longer life.

Rolling type diaphragms—made of carefully selected and specially tanned and treated sheep-skin, properly cut and formed.

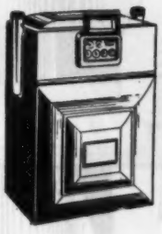
Interchangeability of all parts—reduces your inventory; In the EMCO No. 0 the entire mechanism is mounted on a removable central casting, easy to handle and interchangeable with any other EMCO No. 0 body or cover; adjustment may be made on tangent without removing cover. In the IRONCLAD all parts are interchangeable with other Ironclads.

EMCO #0
CAST IRON
DRY GAS METER

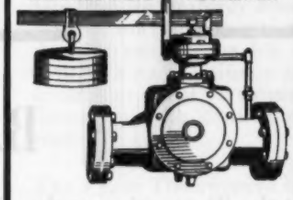
IRONCLAD
CAST IRON
DRY GAS METER



EMCO #0
CAST IRON
CURB BOX
METER



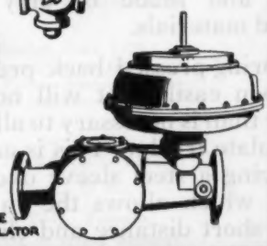
EMCO
TIN METER



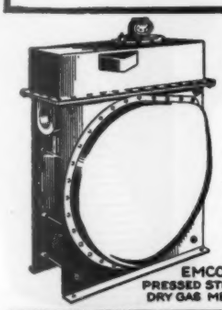
EMCO HIGH PRESSURE
BALANCED VALVE REGULATOR

EMCO WATER HEATER
AND GAS APPLIANCE
REGULATOR

EMCO
DOMESTIC SERVICE
REGULATOR



EMCO LOW PRESSURE
BALANCED VALVE REGULATOR



EMCO #5
PRESSED STEEL TYPE
DRY GAS METER

WESTINGHOUSE
FLUID POSITIVE
GAS METER

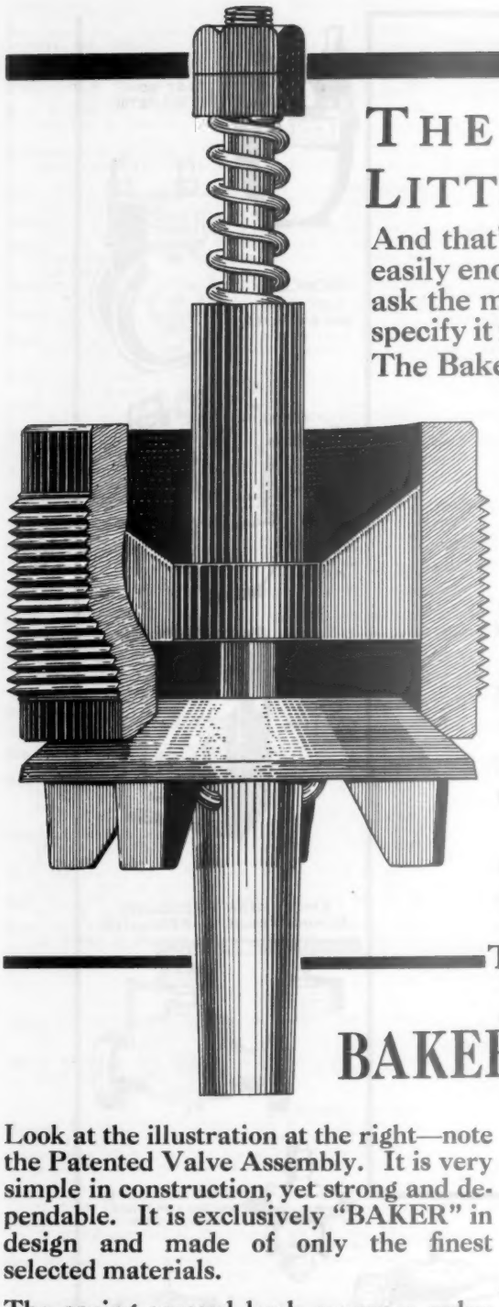
EMCO
LARGE CAPACITY
CAST CASE DRY
GAS METER WITH
EMCO COMBINED
RECORD GAUGE

EMCO
ORIFICE GAS METER

PITTSBURGH EQUITABLE METER COMPANY

MAIN OFFICE AND WORKS PITTSBURGH, PA.

NEW YORK CHICAGO COLUMBIA, S.C. LOS ANGELES DALLAS TULSA SEATTLE KANSAS CITY SALT LAKE CITY



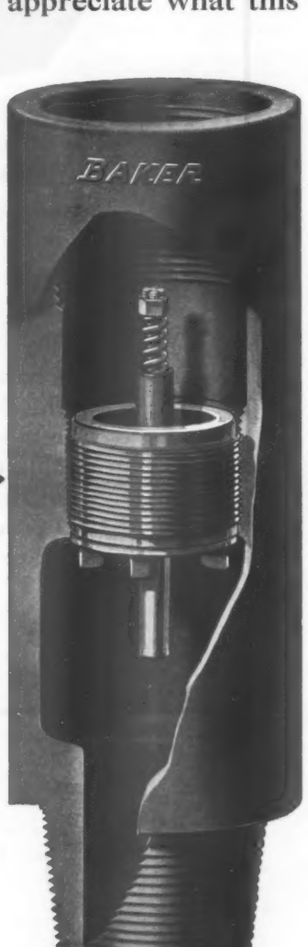
THE BIGGEST—MOST IMPORTANT—LITTLE THING YOU'VE EVER SEEN

And that's not merely our sayso—you can prove it to your own satisfaction easily enough—just look for the Baker Drill Pipe Float in any oil field and ask the man who uses it. Let him tell you how satisfactory it is, and you'll specify it for your wells.

The Baker Drill Pipe Float Valve Assembly—Patented by Baker—has TWO very important functions, making for greater economy of operation and less trouble during the drilling operation: It relieves the entire equipment of load and strain and it prevents the bit from plugging. You will at once appreciate what this means in your drilling operations.

SAVES EQUIPMENT—The Baker Drill Pipe Float, as its name implies, floats the drill string and takes the load off the brakes, lines, drum, threads on the drill pipe—the entire equipment.

PREVENTS PLUGGING—When back pressure, of any nature, occurs the valve closes and prevents the bit from plugging. It also prevents plugging when running in the drill pipe string.



Drill Pipe Float
Patented

THERE IT IS—ON THE JOB IN THE

BAKER DRILL PIPE FLOAT

Look at the illustration at the right—note the Patented Valve Assembly. It is very simple in construction, yet strong and dependable. It is exclusively "BAKER" in design and made of only the finest selected materials.

The spring-pressed back pressure valve will open easily, yet will not open any farther than is necessary to allow the fluid to circulate freely. This is accomplished by placing a steel sleeve over the valve spring, which allows the valve to open only a short distance and eliminates unnecessary wear on the spring and valve.

Note also the construction of the bottom side of the valve, which is for the purpose of preventing a plugged string in the event that the valve, for any reason, becomes detached from the valve stem. (Regular inspection of the valve will avoid such an occurrence, but the provision for such an accident will be appreciated by careful operators.)

Another important feature of the Drill Pipe Float is the enlarged and unobstructed opening below the valve for circulation.

Should the drill pipe get stuck, for any reason, the valve assembly can be broken out with ease, facilitating the elimination of the difficulty.

The Baker Drill Pipe Float has many safety features and it is thoroughly reliable in every way.

If you wish to take the strain off your equipment and relieve it of the load it ordinarily carries; if you wish to eliminate plugging of the bits and wet jobs—specify Baker Drill Pipe Float and GET IT.

Saves Equipment
Relieves the load on Brakes, Line, Drum, and Rig.

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Tulsa, Oklahoma Houston, Texas

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220 E. Brady St., Tulsa, Okla.
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Keeps the Bit from Plugging and Prevents Wet Jobs.

CENTRAL WEST FIELDS

(Continued from Page 68)

the Elmore Williams, Section 5. Bailey and Seitz are drilling on the J. R. Johnson, Section 4, Gill Township, same county. Dome Oil Co. is reported nearing the deep pay sand on the Morris Unger, Section 26, same township. Burns & Carey are drilling on the Lige Duffer, Section 30,Turman Township, same county.

Spencer County, in the extreme southern part of Indiana, was hard hit with three dry holes. Libb and others' test on the William Arnold, Section 17, Huff Township, is given up as a failure. The Ohio Oil Co.'s test on the Nine Winchell, a mile north of Rockport, is in the dry list at a total depth of 1,400 feet, and Ben Robinson and others' No. 1 A. C. Huff, Section 18, and 4½ miles north of the town of Troy, has been given up as a duster at a depth of 830 feet. Randall & Sharp are drilling a second well on the Leo Strassell, Section 3, Ohio Township. Geo. W. Randolph and others are drilling an offset to No. 1 on the Leo Strassell, same township and county.

In Perry County, P. E. Tichenour and others drilled a dry hole on the Welborn farm, at the mouth of Deer Creek. Hutchins and Robertson are drilling on the Joseph Schneider, Section 22, Troy Township, and about 3 miles north of Tell City.

ILLINOIS

While no new completions are reported from Illinois, a few new wells are under way. In Wabash Township, Wabash County, the Ridge Farm Oil Co. is drilling on the Dr. C. E. Gilliatte, Section 14, also drilling on the Edward Wright, Section 13. Joe S. Young, Jr., and others are drilling No. 11 Joseph Keyser, same section. Phipps, Blosser and others are working on the Holson-Dorney property, Section 19.

Snowden-McSweeney interests are drilling No. 35 on the M. X. Piper, Section 11, Petty Township, Lawrence County.

Grant Jessup and others are starting a second test on the John Ackerman, Section 3, Prairie Township, Crawford County.

With 16 wells under way in the new Dupo Field in Sugar Loaf Township, St. Clair County, in the western part of Illinois, the next week or so should see a number of completions. This area is the most active of any part of Illinois and is very shallow, ranging from 600 to 800 feet.

KENTUCKY-TENNESSEE

(Continued from Page 80)

Utica, also a duster in a test on the Hamp Sheldon farm, just south of the Hayden Pool. Same party drilled a duster in No. 3 on the J. C. Park farm, in the Red Hill Field, and a 20-bbl. initial producer in No. 5 on the J. L. Park farm.

Penn-Indiana Oil Co.'s No. 5 on the First National Bank & Trust Co.'s land consisting of 163 acres, is credited with a 24-hour production of 35 bbls. Ohio Oil Co. drilled a dry hole on the Robert Moseley farm, same county. Cumberland Petroleum Co. struck a duster in a second test on the R. E. Jackson farm, at Cave Run, in the Friendship Chapel Pool.

Ohio County Wells

Wood Oil Co., Inc. brought in a 30-bbl. initial producer in No. 11 J. C. Smith farm. Same company's No. 6 J. C. Mitchell 130 acres, produced 15 bbls. in 24 hours, while No. 1 on the Maggie Ferguson farm was a dry hole.

Woodward Oil Co. of Lexington, Ky., drilled a dry hole on the W. R. Moseley farm, near Buford, a few miles west from the Ambrose Pool and near the division line between Ohio and Daviess Counties.

In the Dundee Field, the Dundee Oil Co.'s Nos. 3 and 4 on the Sallie Thomas farm, produced initials of 15 and 12 bbls. respectively. C. E. Daugherty and others' No. 3 on the W. A. Hewlett, produced only 2 bbls. initial. Daley & Lowman, Cleveland, Ohio, operators, drilled a dry hole on the Ira Bryant farm, as well as a duster on the Jud Hewlett farm. The Whitmer Oil & Gas Co. drilled a dry hole on the Dan Smith farm.

Allen County Well

The Tracey Supply Co. and others' No. 6 on the Jemima Morrison farm, in the Gainesville Field in the northwestern part of Allen County, produced an initial production of 6 bbls. at a depth of 352 feet.

A. F. Bellamy, drilling on his own farm, in the Deanfield area of Ohio County, failed to find any oil of consequence in the Jett sand, but encountered a nice volume of gas in this formation. He will go on down in hopes of developing a commercial producer in the Barlow sand, casing off the gas in the Jett for future development.

Spudding has started on the Jennie Wilson 1,300-acre farm, known as the Bon Harbor farm, a short distance out of Owensboro, the contract work being done by R. W. McMahan, the first drilling tour being taken care of by Earl Diefenbach, a veteran Oklahoma driller. Mr. Diefenbach, however, suffered the loss of three fingers when he hung his hand in the metal line of the big 84-foot derrick. The rig was shut down and "Curley" as he is known in the oil fields was removed to the hospital at Owensboro, where the mangled digits were removed and he is reported getting along nicely. The accident happened when the drill was down close to 100 feet. Sam Anderson, another well known driller who is on tour opposite Diefenbach, was put on a double shift.

Doctor Sirman is reportted to have a showing for a gusher in his No. 20 on the Nancy Farmer lease, at Friendship Church, in Ohio County. The shooter estimates it good for close to 500 bbls., the pays being found in three sands, all given a shot.

Hupp & Duff on the Trodgen and C. E. Daugherty and others on the same farm, in the Bartlett Pool, are in the sand and showing large production.

The second test of the Ohio Oil Co., on the Kennedy farm, south of Greenville, in Muhlenburg County, has been put on the pump and will make a good producer but not as large as the initial well.

Report from Henderson County is that Niagara Oil & Gas Co. is drilling on the Jeter farm, that is making an excellent showing and may mean the opening of a productive pool for that county.

SHELL PETROLEUM CORP. HAS A MOTOR OIL WEEK

The Shell Petroleum Corp. observed the week of June 16-22 as Shell Motor Oil Week. As a final preliminary step a series of 600 meetings was held throughout Shell's distributing and jobbing territory on Friday evening, June 14, at which it was estimated 20,000 Shellmen were in attendance. The purpose of these meetings was to acquaint jobbers, distributors and salesmen with the week's program.

Shell Motor Oil Week was largely educational in character in keeping with the Shell Petroleum Corp. policy of acquainting the motoring public with the most advanced means for protecting and insuring long life and economical operation of motor cars.

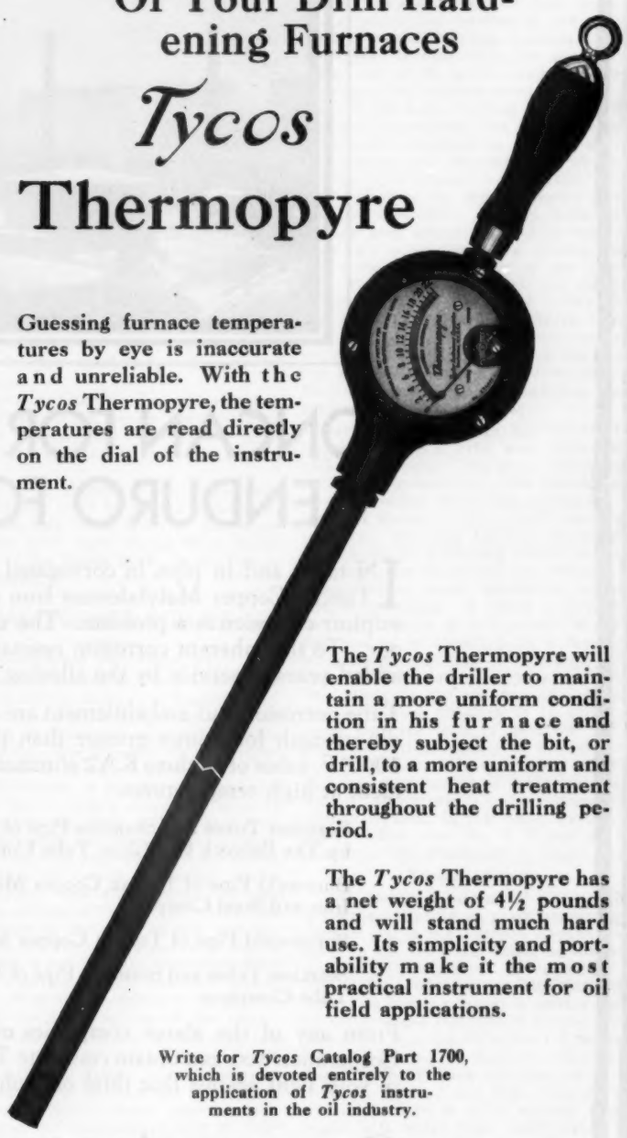
During the week of June 16-22 motorists who "stopped at the sign of the shell" received every opportunity to obtain from the salesmen facts concerning motor oil and gasoline, the effect of carbon on the performance of automobiles, and the proper lubrication of motor cars. This was accomplished through especially prepared booklets and the recently inaugurated "Ask the Shell Man" policy of the corporation.

The Shell Petroleum Corp. owns its own producing wells, transportation facilities and marketing units. It operates 2,650 miles of pipe lines and over 6,000 owned and leased tank cars. Refineries are located at Wood River, Ill.; East Chicago, Ind.; Arkansas City, Kans.; New Orleans, La., and a new refinery is under construction in Houston, Tex. Headquarters of the corporation are in St. Louis, Mo.

To Check the Temperatures

Of Your Drill Hardening Furnaces

Tycos Thermopyre



Guessing furnace temperatures by eye is inaccurate and unreliable. With the *Tycos* Thermopyre, the temperatures are read directly on the dial of the instrument.

The *Tycos* Thermopyre will enable the driller to maintain a more uniform condition in his furnace and thereby subject the bit, or drill, to a more uniform and consistent heat treatment throughout the drilling period.

The *Tycos* Thermopyre has a net weight of 4½ pounds and will stand much hard use. Its simplicity and portability make it the most practical instrument for oil field applications.

Write for *Tycos* Catalog Part 1700, which is devoted entirely to the application of *Tycos* instruments in the oil industry.

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TONCAN FOR TANKS AND PIPE
ENDURO FOR STILL TUBES

IN tanks and in pipe, in corrugated sheets for siding, roofing and oil field buildings, Toncan Copper Molybdenum Iron outlasts other metals, particularly in fields where sulphur corrosion is a problem. The explanation of Toncan's greater life is a simple one. To the inherent corrosion resistance of commercially pure iron, metallurgists have added years of service by the alloying of copper and molybdenum.

Tube corrosion and embrittlement are no longer a problem in the refinery. With a tensile strength four times greater than that of low carbon steel on continued heating at 1000° F. tubes of Enduro KA2 eliminate the costly losses due to corrosion and embrittlement at high temperatures.

Seamless Tubes and Seamless Pipe of Toncan Copper Molybdenum Iron are fabricated by The Babcock & Wilcox Tube Company.

Butt-weld Pipe of Toncan Copper Molybdenum Iron may be obtained from Republic Iron and Steel Company.

Spiral-weld Pipe of Toncan Copper Molybdenum Iron is produced by Naylor Pipe Co.

Seamless Tubes and Seamless Pipe of Enduro KA2 are made by The Babcock & Wilcox Tube Company.

From any of the above companies or from the Research Staff of Central Alloy Steel Corporation you can obtain complete Toncan and Enduro data, and helpful co-operation in your fight against that thief of profits—corrosion.

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CANADIAN FIELDS

(Continued from Page 60)

daily average production for the field of 3,071 bbls.

Tests to Deep Lime

A number of tests are now drilling in the deep lime, including two in the south end of the field, which, judging by results secured in Home Oil Co.'s 1 and 2, promises to be the most prolific portion of the Turner Valley. North West-Associated's No. 1, LSD 6, Section 20-19-2w5, is drilling below 5,392 feet, more than 114 feet in the lime, and has already encountered two shows of gas. Home Oil Co.'s No. 3, LSD 14, same section, is in the top of the lime at 5,033 feet and has started drilling out the cement. Casing trouble near the top of the hole has held up operations. The first cementing job on the large casing, to prevent escape of gas, has been finished. Foothills Oil & Gas Co.'s No. 3 (Southwest Petroleum's) LSD 16, Section 8-19-2w5, is drilling just above the lime at 4,399 feet, after cementing at 4,366.

In the Central Field, Foothills Oil & Gas Co.'s No. 2, LSD 8, Section 1-20-3w5, is drilling 177 feet in the lime at 4,534 feet. The well has encountered increasingly wet gas production and is unofficially reported making 5,000,000 feet a day; separators have been set up, but no gas has been run through them. McLeod Oil Co.'s No. 4, LSD 16, Section 1-20-3w5, at 1,308 feet in the lime with a total depth of 5,030 feet, has increased its production in the lower horizon from 120 to 150 bbls. a day.

Dalfin Petroleum's No. 1, LSD 5, Section 34-20-3w5, has derrick up and is installing machinery, test to spud in about July 20. Anaconda Oil's No. 1, LSD 16, Section 22-20-3w5, is rigging up and will spud in next week. Vimy Oil's No. 1, LSD 7, Section 24-20-3w5, has spudded in with a heavy duty standard outfit. Vanalta Oil's No. 1, Section 34-20-3w5, is reported spudding in. J. C. Dallas, of Calmont Oils, Ltd., is supervising operations. Invader Oil's No. 1, LSD 10, Section 9-21-3w5, has derrick up. This is the first active test north of the north branch of Sheep Creek since 1915.

Deepest Test on Structure

Otuwest Petroleum's No. 1, LSD 5, Section 35-19-3w5, is drilling at 1,410 feet. This location is on the New Black Diamond structure, one of the outlying fields of the Turner Valley, and Outwest's No. 1 is now the deepest test yet drilled on the structure. The drill got the cardium sand in the Benton at 475 feet, indicating that the Dakotas would be reached around 1,600 feet, which would put the test on a par with the shallower tests in the Turner Valley. Cameron Petroleum's No. 1, LSD 8, Section 36-20-3w5, another test of this structure, is now rigging up.

In the Central Field, Structure Oil's No. 2, Section 12-20-3w5, is rigging up.

On the Sinclair structure, D. P. McDaniel, J. Newton Harvey and Richard Bate have tentatively located a test in Section 24-17-4w5.

In the Waite Valley, Gibraltar Oil's No. 1 has been located in LSD 4, Section 28-20-3w5, to spud in before August 1. Richfield Petroleum's No. 1, Section 35-20-3w5, is drilling 21¼-inch hole at 465 feet after getting the lower Bentons at 360 feet, indicating the formations are approximately 1,000 feet shallower than in the Turner Valley. Clarence Snyder, who drilled Vulcan Oil's No. 1 in the Turner Valley, has been appointed Richfield's field supervisor.

On the Moose Dome, Moose Oil's No. 1 is rigged up ready to spud in. The location is west of Calgary and about 47 miles up the Elbow River.

On the Sinclair structure, Banner Oil's No. 1, LSD 6, Section 34-17-3w5, is working on derrick. Banner's No. 2 has been located in Section 35-17-3w5. The Banner lease is 6 miles north of the Prince of Wales ranch, and 12 miles south and somewhat west of the old Dingman discovery well, now Royaltie's No. 1, in the Turner Valley Field.

Calling Valley Structure

A potential oil field will be tested in the Calling Valley structure, the first unbroken structure of the Rocky Mountains in southern Alberta. Anglo-Indian Oils Corp. of Calgary, headed by J. F. M. Moodie, has leased 8,000 acres and will commence No. 1 test this summer, in either LSD 1, Section 36-21-3w5 or LSD 4, Section 31-21-2w5. Seepages of oil and gas have been observed on the small lakes in the vicinity and last winter a hole bored in the ice of Spirit Lake yielded gas which burned with a 2-foot flame. On School Lake oil and gas have forced a way through 8-inch ice. Equipment for a standard tool test is being hauled to location. A report by Stewart Troop, B.Sc., M.E.I.C., on the structure, describes it as the first unbroken anticline east of the mountains, with geological column similar to the Turner Valley, but a less intense degree of folding and fracturing. It is regarded as a possible crude oil field, rather than a crude naphtha area.

In the Border area, southern Alberta, the most important recent development has been on the Beaver Dome structure east of Coutts, where Madison Oil's No. 2, LSD 10, Section 24-2-11w4, at 1,657 feet depth, has encountered a further gas flow estimated 10,000,000 feet a day. Several previous gas showings were met, including one at 1,641 feet. It is planned to cement 8¼-inch casing around 1,660 feet and continue drilling. Another gas sand which may double the production is looked for at 1,850 feet, with possibilities of oil at 2,200 feet.

On the Red Coulee structure, west of Coutts, Vanalta Oil's No. 1, SW Section 4-1-16w4, has spudded in. On the same structure, Hol-Gar Petroleum's No. 1, LSD 1, Section 11-1-17w4, is reported ready to spud in. The location is approximately 12 miles west of Coutts, and the test will be carried into the lime, which is looked for at 2,700 feet. Ko-Tops Oil's No. 1, SE quarter Section 2-1-17w4, is reported rigging up.

In the Skiff Field Lion Gate Oil Co.'s No. 1, LSD 1, Section 33-6-15w4, has derrick up.

In the Chin district, Lethalta Oil's No. 1, LSD 5, Section 33-8-18w4, which has been shut down since last fall at 2,300 feet, is reported definitely abandoned and the casing pulled. The Chin structure is 18 miles east of Lethbridge, and abandonment is reported due to a difference with lease holders.

Bear's Den Structure

Considerable interest is felt in the reported discovery of oil on the Bear's Den structure in the Sweetgrass Hills, a short distance south of the international boundary, where a test drilled jointly by the Burns-Hardie syndicate and Sunburst Oil & Refining Co. is reported to show a bailing production between 50 and 100 bbls. from the Baskoo sand at 2,472 feet. The crude is described at 38.7 gravity, and at 2,540 feet when the drill passed out of the sand into the black shale, there was 700 feet of oil in the hole. Top contour acreage on the structure is held by Sunburst Oil & Refining Co., Burns, Hardie and associates, and Kenneth Frazer and associates, of Butte, Mont.

In the Kevin Field, Westmont Oils, Ltd., of Edmonton, has contracted with Elliott Drilling Co., of Kevin, for two tests. Frank McLear is president and managing director of Westmont Oils.

In the Cypress Hills Field, southeastern Alberta, Eagle Butte Oil Co.'s No. 1, LSD 3, Section 31-7-4w4, is drilling at 3,800 feet. The main gas flow at 3,340 feet has been shut off, but deeper drilling has encountered additional gas.

F. E. Cole and associates of Winnipeg, Man., have filed on 8,000 acres in the Taber district, southern Alberta. Campbell Hunter, the English geologist, is reporting on this acreage for the syndicate. Another block of leases has been secured on a structure close to Lethbridge, which is being geologized by Dr. T. B. Williams.

The Day Oil Co., of Edmonton, which hase five producing wells in the Montana fields, has secured 400 acres in Alberta, distributed over the Skiff, Quarantine Reserve, Beaver Dome and Aldersyde's structures. The acreage has been geologized by G. C. Howard. The company is also investigating the Wainwright, Turner Valley and Waite Valley Fields.

In the Wainwright Field, east-central Alberta, Wainwell Oil's No. 4, LSD 15, Section 36-44-7w4, is reported making 280 bbls. of 19 gravity crude. A settled production of around 100 bbls. is looked for, with possibilities gas pressure may flow the oil. Production is being pumped direct to the company's refinery.

North of Wainwright, Weymarn Petroleums, Ltd., is drilling a series of structure tests with a light outfit preparatory to locating a deep test for which rotary will be used. Admiral Oils' No. 1, LSD 16, Section 36-44-7w4, is installing drilling equipment, to spud in next week. Brandon Syndicate has rotary test rigged up near Wainwright.

A heavy storm recently caused considerable damage to the Wainwright area.

Daugherty Petroleum's No. 1 has derrick up and is erecting camp buildings. Peninsular Petroleum's No. 1 has derrick up.

Ribstone

On the Ribstone structure, eastern Alberta, Meridian Oil's No. 1, LSD 1, Section 16-45-1w4, bailed 54 bbls. in six hours without lowering the level.

Southwest of Lloydminster, Saskatchewan, Oxville Oil, Gas & Development Co.'s No. 1, Section 10-46-2w4, will spud in next month.

In eastern Canada, the reported discovery of oil on the George Legassie farm in York County, near Fredericton, New Brunswick, appears to have been premature.

In northern Ontario, a structure drilling campaign is to be started shortly by the James Bay Basin Oil Co. The company has 4,000 acres on the Gray Goose Islands of the Moose River, in the James Bay district.

CALIFORNIA FIELDS

(Continued from Page 64)

Marland and Standard, which control the entire productive acreage in the older section of the field, and this commendable policy is expected to continue in force indefinitely. The Superior Oil Co. added a new well to its list of producers in the Richfield district a few days ago by completing No. 1 Mosley doing 235 bbls. of 26.4 gravity oil from 4,495 feet. Several other wells are also nearing completion in this field and three or four should be tanking oil before the month draws to a close. The Continental Oil Co., with six strings of tools to its credit, has three wells in the pay. These are No. 1 Mondotte, No. 7-A Pyne and No. 3 R. C. Nos. 1 and 2 on the Guarantee lease of the Superior Oil Co. have not picked up the oil sand but should do so shortly as they are right on top of the pay.

The Standard Oil Co. is running two strings of tools in the Inglewood Field of Los Angeles Basin, where operators are withholding development of prolific deeper zones until a more opportune moment, and the company expects to complete No. 60 on Los Angeles Investment Lease No. 1 some time within two weeks as this well picked up the top of the pay several days ago. Additional work is contemplated by the Standard on Vickers Lease No. 1 as material is on ground for two new wells, Nos. 22 and 23. The Sunset Pacific Oil Co. is cleaning out No. 31 Marine in the Rosecrans Field preparatory to resuming work at 4,920 feet and, although this project is scheduled to be carried down into the lower horizon, it will not precipitate any additional development as the Barnsdall and Union, the largest holders of productive acreage in this field, are definitely committed to undertake only a limited amount of development work until conditions improve. The Barnsdall is the largest single producer in the Rosecrans Field with a daily production of 3,750 bbls., followed by the Union with 1,200 bbls. and the General Petroleum with 400 bbls. There are 97 wells producing in this district, nine of which are producing under a natural flow, 40 on compressor and 48 on the beam. The Dominguez Field is also reflecting restricted development work due to the policy of the Union and Shell which contemplates the reservation of this field until conditions again approach normalcy. There are 65 wells producing in this field, 18 of which are flowing unaided, 14 on compressor and 33 pumping. The Union is the largest single producer in this field with a current daily output of approximately 5,000 bbls., followed by the Shell with 3,000 bbls. and the Associated with 700 bbls.

Lawndale

The Lawndale Field of Los Angeles Basin, which has resulted in one of the most disastrous drilling campaigns ever undertaken in California, has practically passed out of the picture and each week witnesses the abandonment of one or more of the many drilling projects. The Standard abandoned No. 1 Vance last week and is expected to pull out of the entire area upon the conclusion of work on No. 1 Freeman, a deep test being drilled east of the Mines Airport northwest of Lawndale. Twenty holes have already been abandoned and at least 35 more are scheduled for a similar fate. Six wells are producing in the Lawndale Field, five of which are flowing unaided and one pumping. The San Clemente Oil Co. and the Smith Development Co. are the only two concerns which have developed anything approaching favorable production, although the Pacific Western has a pumping well making 285 bbls. per day.

Development work in the Huntington Beach Field is a little more active and although several deep-zone exploratory wells were spudded in a few months ago, these operators have been persuaded to hold off deeper drilling until conditions improve. The Rex Oil Co. carried No. 12-A down to 5,256 feet before suspending deep-zone work and the company is attempting to secure commercial production at this point. A string of 11¾-inch has been landed in this project at 3,332 feet and it is therefore in a favorable mechanical condition to proceed with deep-zone exploration at the proper time. The Richfield Oil Co. has also delayed deeper drilling although it is quite obvious that the well in question, No. 1 Bardeen, will ultimately be carried down for a conclusive test as a string of 13⅜-inch has been landed at 3,454 feet. The Sunset Pacific Oil Co. is running two strings of tools in this field, having recently taken over No. 1 Texcal of the American Oil Producers, a recent spud.

Ventura Avenue

The Pacific Western Oil Co. put No. 2 Southern Pacific on a preliminary production test in the Ventura Avenue Field early in the week but failed to result in commercial production. It showed an initial daily production of 750 bbls. from 7,033 feet but the output is cutting about 75 per cent and will require further work. The Penn Kan Oil Co.'s No. 1 Francisco, which, like No. 2 Southern Pacific of the Pacific Western Oil Co., is in the southern part of the field, also showed up unfavorably as it is making considerable salt water from 7,390 feet. The origin of the water in No. 1 Francis has not yet been determined but looks like bottom water in view of the fact that the State Mining Bureau approved the shutoff at 7,345 feet. There are 42 strings of tools in operation in the Ventura Avenue Field at the present time and several completions can be anticipated during the next 30 days. The General Petroleum spudded in No. 1 Ferguson in the Rincon Field of Ventura County early in the week. The importance which attaches to this well is due to the fact that this project may be carried down to the deep zone recently proven by the Richfield Oil Co. The upper zones have failed to sustain intensive development although many of these shallow wells are commercially productive. There is really only one satisfactory producer in the Rincon Field, however, as the average daily well production for the field is only 121 bbls. The Chanslor-Canfield Midway Oil Co.'s No. 2-B Hobson is the only well showing substantial production, the present output aggregating 1,100 bbls. of 29.4 gravity oil daily.

SOUTHWEST TEXAS

(Continued from Page 59)

southeast of the Michalk & Clark No. 1 Johnson, which a few months ago bailed 50 bbls. one day and which has been having trouble ever since trying to complete the hole properly. E. L. Chapman has made a deal taking over this proposition and is arranging to work over the hole and get it on the pump. It found production at around 1,900 feet and it has been the general opinion it should make a fairly good commercial well. Chapman has spudded in another test on the Johnson land about two or three locations from No. 1 Johnson and has started drilling.

Diggs and associates are going to drill on the N. C. Holman farm about a mile northeast of Thorndale though the location has not been definitely made. It will be about a 2,200-foot test.

Smith and associates in Williamson County, 1½ miles southeast of the old Thrall Field, on the Kruger farm, spudded in and then shut down for a time but have now resumed drilling. Their test is to be an Edwards lime test and the Edwards should be picked up at about 2,300 feet. The magnetometer was used extensively over this tract along with work by surface and subsurface geologists before the location for the test was made. It is near the Thrall Pool which was the first pool ever opened producing from the Serpentine.

There is quite considerable additional activity in both Milam and Williamson Counties in the way of assembling lease blocks preparatory to starting other tests.

COMPLETIONS

Duval County

Magnolia Petroleum Co.'s No. 3 Hahl, Survey 250, Block 24, completed at 2,346 feet, making 75 bbls. daily. G. M. Partee's No. 4 Moody, Survey 60, completed at 2,361 feet, 125 bbls. daily.

Live Oak County

Dr. Frank W. Lynch's No. 1 Sawyer, completed at 622 feet is small gas well, showing some oil.

Webb County

Carolina-Texas Oil & Gas Co.'s No. 7 Benavides, Survey 683, completed at 2,596 feet, making 18,000,000 feet gas, rock pressure 610 pounds.

O. W. Killam's No. 14 Cuellar, Cerrito Blanco grant Survey, was completed making 50 bbls. daily.

ABANDONED TESTS

Jim Hogg County

T. J. Conway's No. 2 Leyendecker, Survey 234, Block 4, has been abandoned at 1,501 feet.

Webb County

Trussell-Cezeaux-Putman's No. 3 Bruni, Survey 10, Block 30, has been abandoned at 2,350 feet showing oil and salt water.

Starr County

The Texas Company's No. 1 V. C. de Guerra, Porcion 68, Share 92, has been abandoned at 3,869 feet.

NEW LOCATIONS

Bastrop County

Superior Oil Co.'s No. 1 R. J. Moore, James Raines Survey, is location southwest corner.

Caldwell County

Cranfill & Reynolds' No. 3-A J. L. Northcut, S. Shupe Survey, is location 300 feet northwest of No. 1.

Humble Oil & Refining Co. and Luling Oil & Gas Co.'s No. 5 Floy Gray, 150 feet north line, 150 feet west line, set 42 feet 10-inch casing. Their No. 4-A Floy Gray, 150 feet north line, 750 feet west line, is rigging up; No. 6-A Floy Gray is rigging up; No. 5-C Floy Gray, 150 feet south line, 760 feet west line, rigging up; No. 6 T. A. Tiller is moving in rig.

Magnolia Petroleum Co.'s No. 1 Merriwether, A. Floyd Survey, 450 feet west line, 100 feet north line, is location.

Zapata County

Killam-Duggan's No. 5 Cuellar, Cerrito Blanco grant Survey, 2,900 feet east line, 1,350 feet south line of 1,772-acre tract, is location.

South Texas Production Co.'s No. 5 Joe Jennings, Cerrito Blanco grant Survey, 2,775 feet northeast lines, 1,585 feet northwest lines, is rigging up.

Webb County

John J. O'Hern's No. 2 Benavides, SE NE Survey 694, 150 feet north and west lines, is location.

Mgnolia Petroleum Co.'s No. 1 O'Hern-Benavides, Survey 694, Block 2, 150 feet south and east lines, is location.

Jim Hogg County

W. R. Shankle's No. 1 Holbein, Las Animas grant Survey, Share 3, 150 feet north and west lines, Hogg Ridge Subdivision, is location.

T. J. Conway's No. 3 Leyendecker, Survey 234, is rigging up.

Humble Field—Duval

Humble Oil & Refining Co.'s No. 22 Kohler, Survey 395, located 495 feet west line, 165 feet north line, at 1,854-78 feet, showing gas, oil and salt water; No. 23 Kohler, Survey 404, located 1,485 feet south and west lines, at 1,981 feet, drilling; No. 29 Kohler, Survey 395, located 165 feet south and west lines, at 304 feet, set 10-inch casing; No. 30 Kohler, 165 feet north and west lines, is rigging up rotary; No. 31 Kohler, Survey 172, 495 feet east line, 165 feet north line, at 340 feet, set 10-inch casing; No. 32 Kohler, Survey 399, located 495 feet east line, 165 feet south line, derrick. Sun Oil Co.'s No. 1 Lopez, Survey 731, located 15 feet north line, 2,000 feet east line, at 2,200 feet, drilling.

Driscoll Field

The Texas Company's No. 1 Hyatt, Block 25, Sweden Farm Tracts, 660 feet east line, 1,960 feet north line, location to be announced later.

Schoolfield-O'Byrne

Magnolia Petroleum Co.'s No. 3 Hahl, Survey 250, Block 24, located 450 feet north line, 150 feet east line, at 2,344 feet in sand, set casing; No. 4 Hahl, Survey 250, Block 24, located 150 feet north line, 450 feet east line, location; No. 5 Hahl, location; No. B-7 Hahl, Survey 61, located 650 feet south line, 2,950 feet east line, at 3,740 feet, is drilling. G. M. Partee's No. 2 Moody, Survey 60, located 450 feet west line, 150 feet north line, at 1,900 feet, drilling; No. 4 Moody, Survey 60, located 1,348 feet north line, 150 feet west line, at 2,358-61 feet, in sand, bailing. S. & O. Oil Co.'s No. 5 Hahl, Survey 250, Block 23, located 750 feet east line, 150 feet south line, at 400 feet, drilling.

Randado Field—Jim Hogg

Magnolia Petroleum Co.'s No. 42, M. S. Bank, Survey 235, located 330 feet west line, 4,254 feet north line, at 3,031 feet, drilling. Randado Oil Corp.'s No. 35 Palacious, Survey 291, Block 2, 150 feet south line, 450 feet east line, at 100 feet, drilling. T. J. Conway's No. 2 Leyendecker, Survey 234, Block 4, 50 feet west line, 450 feet north line, at 1,501 feet, is standing.

Henne-Winch-Fariss

Geo. S. Marshall's No. 4 Holbein, Survey 11, Block 10, Share 3, 150 feet south and west lines, derrick up; No. 5 Holbein, Survey 5, Block 10, Share 3, 150 feet north and west lines, location. Magnolia Petroleum's Co.'s No. 1, J. M. G. Martinez, E. half of Survey 6, 150 feet north and west lines, rigging up.

Schott Field—Webb

Livingston & Payne's No. 1 Guerra-Ochoa, Survey 58, location 917 feet east line, 470 feet south line, at 1,647-49 feet, test oil, preparing to set casing.

Mid-Ojuelos Field

Crown Central Petroleum Corp.'s No. 1 E. Garcia, Survey 463, located 900 feet east line, 150 feet south line, at 1,579 feet, tested dry, standing waiting on orders.

Carolina-Texas Field

Carolina-Texas Oil & Gas Co.'s No. 7 Benavides, SE NE 683 Survey, located 1,000 feet east line, 153 feet south line, at 2,587-96 feet, tested gas on tester. Trapshooter Reilly Oil & Royalties Co.'s No. 2 Benavides, Survey 685, located 1,170 feet west line, 150 feet north line, at 200 feet, drilling.

Magnolia-Cole Field

Cole Petroleum Co.'s No. 67 Benavides, Survey 412, Block 12, located 313 feet east line, 160 feet north line, at 38 feet, standing. Magnolia Petroleum Co.'s No. 1 J. G. Valdez, Survey 754, Block 15, located 150 feet south and west lines, derrick; No. 1 A. Benavides, north half Survey 660, located 660 feet south and east lines, location; No. 1 M. Benavides, north half NW Section 660, located 660 feet south and east lines, at 2,358 feet in sand, set casing; No. 1 C. Benavides, Survey 662, is location 660 feet north and east lines; No. 1 R. Lopez, Survey 455, located 660 feet north and west lines, at 116 feet, set casing.

Cole Gas Field

Shepard and others' No. 1 King-Harper, Survey 323, located 337 feet north line, 1,560 feet east line, is rigging up. Trussell-Cezeaux-Putman's No. 3 Bruni, Survey 10, Block 30, located 300 feet north and west lines, 150 feet north and east lines, at 2,350 feet, test showing oil, bailing. O. W. Killiam's No. 11 Bruni, Survey 3, derrick.

Jennings Field—Zapata

South Texas Production Co.'s No. 1 Roy Jennings, Mira Flores Grant Survey, located 18,055 feet southwest lines, 11,040 feet southeast lines, at 1,940 feet, drilling. H. Muckleroy, Jr.,'s No. 2 Trevino, Survey 66, Block 3, located 150 feet northeast corner, spudded in. O. W. Killiam's No. 14 Cuellar, Cerrito Blanco Grant Survey, located 160-acre tract out of 1,776 acres Cuellar tract, at 1,420 feet, drilling.

Mirando Valley Field

O. W. Killiam's No. 1 Flores, Survey 240, located 850 feet southeast lines, 560 feet northeast lines, at 150 feet, drilling.

Somerset Field—Atascosa

Schimmel Production Co.'s No. 3 H. F. Gayle, Survey C.E.P.I.&M., Block 2, is location 946 feet east of No. 1.

Yoast Field—Bastrop

The Texas Company's No. 8 Yoast, A. Garcia Survey, location.

Pettus Field—Bee

Mission Drilling Co.'s No. 1 Ray at 2,600 feet, sidetracked at about 2,300 feet; No. 3 Ray Ranch, 3 miles east of No. 2, at 595 feet, drilling.

Dobrowolski Field—Bexar

Amelia Balzart's No. 3 J. P. Adams, 150 feet from road, offsetting the Dobrowolski No. 1, has derrick up. W. W. Richardson's No. 1 G. Schmetz Estate, P. L. Buquor Survey, 131 feet north line, 150 feet west line, at 210 feet, drilling.

Somerset Field

American Central Oil & Gas Co.'s No. 4 McConnell, W. G. Baker, No. 138 Survey, located 806.6 feet east line, 685.6 feet south line, rigged up and standing.

Gas Ridge Field

Medio Oil Co.'s No. 2 Hamilton Land Development Co., L. Munos Survey, 200 feet east line, 1,375 feet north line, at 470 feet, drilling.

Joe Bruner Field—Caldwell

Tip de Arman's No. 3 G. F. Carter, Hinds Survey, located 50 feet north and west lines, location. E. R. Brawn & C. O. Miller's No. 2 R. W. Carter, Gerren Hinds Survey, located 150 feet north and west lines, derrick. Cranfill & Reynolds' No. 3 Hanson, James Hinds Survey, at 2,735 feet, in Edwards; No. A-2 J. L. Northcut, S. Shupe Survey, located 300 feet southwest of No. 1. Forest Oil Co.'s No. 1 M. H. Woods, Isaac Weldon Survey, Block 35, south central part of lease, is location; No. 1 T. Enriquez, Luling Townsite, Block 32, center of Lot 30, is location. Gulf Production Co.'s No. 5 J. L. Northcut, at 2,670 feet, waiting on pump; No. 7 J. L. Northcut, James Hinds Survey, at 2,365 feet, in chalk.

T. C. Hafley's No. 1 J. M. Mason, James Hinds Survey, 150 feet south and east lines, at 2,640 feet, shut down; No. 3 Merriwether, A. Floyd Survey, at 2,743 feet, in Edwards, drilled plug, swabbing oil and water; No. 4 Merriwether, derrick. Humble Oil & Refining Co.'s No. 2 Trap Briscoe, at 2,736 feet, in Edwards, flowed for part of a day, then swabbed 45 bbls oil and 12 bbls water per hour, to run rods and tubing; No. B-2 Floy Gray, James Hinds Survey, located 150 feet south and east lines, at 640 feet, in Georgetown; No. B-3 Floy Gray, James Hinds Survey, located 450 feet north line, 150 feet east line of Floy Gray "B" lease, at 2,438 feet, in Taylor Marl.

No. D-1 Floy Gray, James Hinds Survey, located 664 feet north line, 150 feet east line, at 2,681 feet, in Edwards; No. 5 L. G. Hanson, James Hinds Survey, located 701 feet east line, 150 feet south line, at 2,716 feet, in Edwards, swabbing; No. 6 L. G. Hanson, James Hinds Survey, located 100 feet east line, 150 feet south line, at 2,733 feet, in Edwards, drilled plug, swabbing; No. B-3 B. M. Johnson, James Hinds Survey, 206 feet south and 150 feet east lines, at 2,693 feet, waiting on pump.

No. B-8 Moses & Baggett, Schupe Survey, at 2,259 feet, in Taylor; No. B-9 Moses and Baggett at 2,365 feet, in chalk, standing; No. B-10 Moses & Baggett is rigging up; No. B-11 Moses & & Baggett, is derrick; No. B-12 Moses & Baggett, is derrick; No. A-2 J. A. Northcut, James Hinds Survey, 450 feet south line, 150 feet east line, at 2,475 feet, drilling, topped chalk 2,440 feet; No. 2 J. A. Northcut at 3,220 feet, in Edwards, recognized contact; No. A-3 J. L. Northcut, at 2,385 feet, in chalk; No. A-4 J. L. Northcut, at 2,704 feet, waiting on pumping unit; No. B-1 J. L. Northcut, at 2,297 feet, in chalk, topped 2,225 feet; No. B-3 J. L. Northcut, is derrick; No. B-6 Clyant Smith, is rigging up.

No. A-3 Clyant Smith, James Hinds Survey, located 512 feet north line, 150 feet west line, at 2,680 feet, in Georgetown, set 6⅝-inch casing; No. B-2 Clyant Smith, at 1,744 feet, in shale; No. B-4 Clyant Smith, James Hinds Survey, 150 feet north and east lines, at 2,701 feet, in Edwards, rigging up to swab; No. B-5 Clyant Smith, James Hinds Survey, 512 feet north line, 150 feet east line, at 2,707 feet, in Edwards, rigging up to swab.

Humble Oil & Refining Co. and Luling Oil & Gas Co.'s No. 3 C. F. Dye, James Hinds Survey, located 150 feet north and east lines, at 2,705 feet, in Edwards, 200 bbls fluid, 60 per cent oil; No. 4 C. F. Dye, James Hinds Survey, located 526 feet north line, 150 feet west line, at 2,621 feet, in Georgetown; No. A-3 Floy Gray, 150 feet south line, 573 feet west line, at 2,227 feet, in chalk; No. C-3 Floy Gray, James Hinds Survey, located 150 feet west line, 571 feet north line, at 2,550 feet, in chalk; No. C-4 Floy Gray, 571 feet north line, 750 feet west line, is rigging up; No. 4 Addie Hinds, James Hinds Survey, 526 feet north line, 150 feet west line, at 2,690 feet, in Edwards, swabbing, 700 bbls. oil.

No. 5 Addie Hinds, 826 feet north line, 150 feet west line, at 2,707 feet, in Edwards; No. A-4 Johnson, 150 feet north line, 673 feet west line, at 1,398 feet in sticky shale; No. 4 T. A. Tiller, James Hinds Survey, 150 feet south and east lines, at 2,658 feet, in Edwards, swabbing and flowing by heads 1,000 bbls. daily; No. 5 T. A. Tiller, James Hinds Survey, 750 feet east line, 150 feet south line, at 2,100 feet, in Taylor. Shell Petroleum Corp.'s No. 1 Clyant Smith, at 2,669 feet, set casing, drilling in; No. 2 Clyant Smith, James Hinds Survey, at 2,662 feet total depth, drilled plug, well flowed water. The Texas Company's No. 8 Merriwether, at 2,786 feet, standing, shot casing.

Dale Field

The Texas Company's No. 2 J. Moore, J. Gilbert Survey, located 600 feet northwest line, 1,600 feet southwest line, at 1,400 feet, drilling in shale.

Kingsville Field—Kleberg

Humble Oil & Refining Co.'s No. 4 Flato, Block 10, Section 40, 250 feet east line, 450 feet north line, at 6,100 feet, repairing rig.

Agua-Dulce Field—Neuces

Agua Dulce Oil & Gas Co.'s No. 1 Otto Wolters, Section 34, Benton's Pasture, at 2,047 feet, standing. R. & G. Corp.'s No. 1 Brown, George H. Paul Subdivision, C SE NW, Section 87, location; No. 2 Ed Allen, 150 feet north and east lines, at 1,986 feet set 6⅝-inch casing, waiting for better weather to drill in. Spencer & Rhodes' No. 1 The Texas Company Fee, 150 feet north and west lines of Tract No. 6, Roos Subdivision, spudded in.

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WICHITA, KANSAS

Branches Throughout The Oil Fields

LA.-ARK. WILDCATS

(Continued from Page 55)

is drilling in hard lime at 4,020 feet. Something of a mystery well in that the operators are not enthusiastic about giving out any information concerning it, it is reported to have had several shows of both oil and gas, but at what depths and in what formations is a deep, dark secret.

Wildcat North of Richland

Palmer Corp. is drilling in the red beds at 2,703 feet on No. 1 Miles, Section 11-17-6, a wildcat 4 or 5 miles north of production in the Richland Gas Field, and 4 miles west of it Austin & McDonald's No. 1 Millsaps in Section 17-17-6 is arranging for another drill stem test at 2,510 feet. A similar test at 2,337 feet of a red bed sand stratum developed 200,000 feet of gas at 2,437 feet. Normal depth for Richland production further south is around 2,450 feet.

R. L. Gray's No. 1 Long-Bell, in Section 26-8-14, Sabine Parish, was dry in the chalk rock at 1,852 feet, where it made a small show of oil and gas and is drilling deeper.

Several of the major companies are considering a proposition submitted by C. V. Lenz, who has been drilling in Miller County, Arkansas, south of Texarkana, for the past two or three years. Lenz has a solid block of 12,000 acres on five-year commercial leases, comprising the NE Township 15-26, east half of Township, 14-26, and the NW Township 15-25, in which he is offering a one-sixth interest and a well drilled to 3,500 feet for $5,000. The play has been recommended by one or two companies and others are considering coming in.

In Sections 22 and 23-15-26, or the southwest corner of the block, Lenz has drilled five wells, one of which went 3,600 feet and the others to around 3,000 feet, the deep one getting a good show of gas and oil—and salt water—at 2,990-3,000 feet. Several geologists declare his logs show the best sand conditions in the red shales of any wells drilled to that formation in this division, but it is impossible to work out a structure in this locality, and the recommendations that have been made were made purely on the strength of this sand condition and the showing in the well referred to. North of Lenz' stuff, Gulf Refining Co. drilled two wells some time ago and found the same sand condition but no shows.

Cox & Brown, of Shreveport, are building a 5,000 acre block centering on Section 4-18-21, Columbia County, 6 miles south of Magnolia, for a test of the Nacatoch which, if found high, will be taken on down to the Blossom.

Sundby and others picked up 6 feet of sand in No. 1 Faris, Section 27-15-15, on the east edge of Smackover in Ouachita county, and are arranging to set 6⅝-inch for a test, total depth 2,066 feet.

D. S. Brooks, of Shreveport, has 3,000 acres solid centering on Section 27-19-10, three miles southeast of Huttig in the extreme southeast corner of Union Parish, on which he has a magnetometer high and plans a 3,000 foot test. Ohio Oil Co. made location for No. 1 Stout Lumber Co., Acct., 2,330 feet south and 330 west NE cor. NE NW, Section 30-16-13, Union County, about 3 miles north of production in the east extension of the Champagnolle Pool.

Shelby County, Texas

Gulf Refining Co.'s No. 1 Carraway, in the J. H. Patterson survey of Shelby County, Texas, 15 miles southwest of the Logansport district, in DeSoto Parish, test salt water. Bailed to the 6⅝-inch casing seat at 5,030 feet, it stood 3 hours and filled up 150 feet, bailed again for two hours and lowered the water back to 5,030 feet, mudded up and will go deeper.

Title work Gulf Refining Co. wanted done before closing with Baker & Atkins for approximately 1,900 acres of their 30,000 acre block in central Lauderdale County, Mississippi, being completed, trade was closed and Lauderdale Oil & Gas Co., under which title Baker & Atkins are operating, spudded in July 4 on No. 1 Lackey, 990 feet south and 990 feet east NW cor. NE, Section 2-7-16, the location chosen by the Gulf. It is about a mile and a half north of the old Lauderdale Oil & Gas Co.'s No. 1 Gunn in Section 13-7-16, which cored oil sand (Tuscaloosa or Woodbine) at 2,812 ft.

In the Jackson district Lion Oil Refining Co. is building a 2,500 acre block on which it plans to drill in Section 14-5-1e, Rankin County, 4 miles north of the well it abandoned below 4,000 feet a few weeks ago, and on the southeast edge of Jackson townsite.

Robinson & Greer, of Shreveport, have financed two wells to be drilled on their 50,000 acre block in Choctaw County, Alabama, and will make locations north or northeast of their No. 1 Long-Bell, in Section 28-10-4w, abandoned at 3,900 feet, within the next month. Gulf Refining Co. has two core drilling outfits at work on this structure, the Hatchetigbee anticline, one of which is drilling below 500 feet at Bladen Springs.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

NORTH LOUISIANA

BIENVILLE PARISH

Company, farm and location—	Remarks:
W. G. Gray's No. 1 Snyder, SW NE, Sec. 15-17-6	Top Blossom 2,826 ft; arranging drill stem test, 14 ft. sand; T.D. 2,842 ft.

BOSSIER PARISH

Corbett and others' No. 1 Murff, SE cor. NE Sec. 18-17-11	Shut down 990 ft.
Nell & Lanier's No. 1 Biedenharn, SE cor. Sec. 23-21-14	Shut down 790 ft.
Triangle Drlg. Co.'s No. 1 Thigpen & Herold, 1,320 ft. W, 660 ft. N, SE cor., Sec. 11-17-12	Spudded July 5; drlg. 510 ft.
Walker and others' No. 1 Antrim, NW cor. SE Sec. 28-22-13	Drilled 4 ft. deeper; bailed dry; T.D. 3,021 ft; S.D.
Woodmansee and others' No. 1 Bollinger, SE cor. NE Sec. 9-22-11	Shut down waiting orders 3,532 ft.

CADDO PARISH

D. C. R. Oil Co.'s No. 1 Oden, NE cor. NW Sec. 20-19-14	Cmtd. 6-in. 2,402 ft; T.D. 2,423 ft.
Lide and others' No. 1 Oden, SE cor. Sec. 21-19-14	Drlg. 910 ft.
Fred McWilliams' No. 1 Oden, 1,650 ft. S, 330 ft. W, NE cor., Sec. 20-19-14	Location.
Humble Oil & Refining Co. and R. W. Norton's No. 1 Fortner, Sec. 32-21-16	Drlg. lime 4,865 ft.
S. T. Onyett, trustee's No. 1 Dixon, SW cor. Sec. 10-19-14	Rig up.
I. N. Pharis, trustee's No. 1 Oden, NE cor. SE NE Sec. 19-19-14	Location.
Simplex Oil Co.'s No. 1 Dickson, 660 ft. N. and E. C. Sec. 33-20-14	Cored black shale 2,433 ft.
Standard Oil Co.'s No. 3 Henderson, SE cor. SW SE Sec. 7-19-14	Location.
Woodley Pet. Co.'s No. 4-A Knight, 22,991 ft. E and 1,273 ft. N, SW cor., Sec. 35-16-12	Derrick.
Woodley Pet. Co.'s No. 1-B Knight, Sec. 11-15-12	Arranging to deepen; total depth 1,936 ft.

CATAHOULA PARISH

Lochnager Petroleum Co.'s No. 1 Taliaferro, 573 ft. E 396 ft. S C Sec. 26-9-6	Shut down 900 ft.

CLAIBORNE PARISH

El Dorado Chief Oil Co.'s No. 1 Baker, SE cor. SE SW Sec. 26-20-7	Shut down 3,404 ft.
Southern Crude Oil Purchasing Co.'s No. 1 Christian, NE cor. NW SW Sec. 22-23-6	Cmtd. 12½-in. 161 ft; drlg. gumbo 1,350 ft.

DESOTO PARISH

P. J. Becker, trustee's No. 1 Tull, SW cor. NE NE Sec. 22-12-15	Shut down 1,805 ft.
Benedum & Trees Oil Co.'s No. 2 State, 1,700 ft. S and 1,350 ft. W NE cor. Sec. 22-14-12	Drlg. lime 3,005 ft.
Lide & Ford's No. 1 Nabors, SW cor. SE SW Sec. 32-12-11	Set 6-in. with packer 950 ft; tested S.W. and show of oil; lost swab; arranging to plug back to 1,100 ft; T.D. 1,250 ft.
Longstreet Syndicate's No. 1 Ramsey, NE cor. SW NE Sec. 23-13-16	Changing to heavy rig and arranging to sidetrack; T.D. 2,802 ft.
Magnolia Petroleum Co.'s No. 1 Anna Mason, 990 ft. S and 330 ft. E NW cor. SW Sec. 27-12-11	Location.
Magnolia Petroleum Co.'s No. 2 W. H. Mason, 330 ft. N and W C, Sec. 28-12-11	Drlg. chalk 1,235 ft.
R. O. Roy's No. 1 Rogers, Sec. 13-13-14	Drlg. 900 ft.
D. Thomason's No. 1 Nabors, 152 ft. S and 3,162 ft. E NW cor Sec. 6-12-11	Drlg. 1,200 ft.

FRANKLIN PARISH

Davis and others' No. 1 Moore, 600 ft. W and 200 ft. S NE cor. Sec. 12-11-6	Shut down 1,430 ft.

GRANT PARISH

L. C. Swope's No. 7 fee, NE cor. SE Sec. 18-9-1e	Waiting orders 100 ft.

JACKSON PARISH

George O. Baird's No. 1 Tremont, SE cor. NW SE Sec. 24-16-1w	Tested 28 joints mud; arranging to retest; T.D. 3,045 ft.

LASALLE PARISH

Tunica Petroleum Co.'s No. 47 L. & A., SE cor. Sec. 17-7-2e	Arranging to pump; 7 ft. sand; T.D. 818 ft.

LINCOLN PARISH

V. E. Shaw et als' No. 1 Voss, SE cor., Sec. 1-20-3	S.D.; T.D. 2,740 ft.

MOREHOUSE PARISH

Rainbow Oil Co.'s No. 1 Louisville Cooperage Co., 990 ft. S and E NW cor. NE Sec. 33-22-8	Derrick.
J. P. White's No. 1 Chess-Wymond, Section 32-19-6	Old well abd. as dry hole; arranging to deepen; T.D. 2,570 ft.

NATCHITOCHES PARISH

S. D. McDaniel's No. 2 Clark & Morse, 800 ft. E and 350 ft. N C Sec. 23-5-6	Tested 1,000,000 ft. gas and salt water 8 ft.; shut down for orders, total depth 2,536 ft.
Robeline Oil & Gas Co.'s No. 1, NE SW Sec. 7-8-9	Drill stem stuck waiting orders; claim show of gas, total depth 3,230 ft.

OUACHITA PARISH

Ouachita Natural Gas Co.'s No. 2-B D'Arbonne, SE cor. Sec. 25-19-2e	Shut down 3,349 ft.; well under water.
Farish & Russell's No. 1 School fee, NE Sec. 16-16-4	Drlg. hard lime 4,020 ft.

RED RIVER PARISH

Eylers Oil Co.'s No. 1 Chaffraix, NE cor. NE SW Sec. 30-13-10	Drlg. 2,270 ft.

RICHLAND PARISH

Austin & McDonald's No. 1 Millsaps, 660 ft. N and 1,980 ft. E SW cor. NW Sec. 17-17-6	Arranging to test; T.D. 2,510 ft.
Austin & McDonald's No. 2 Millsaps, SW cor. Sec. 17-17-6	Waiting orders; T.D. 2,697 ft.
Austin & McDonald's No. 3 Millsaps, 1,980 ft. S and 660 ft. E NW cor. Sec. 16-17-6	Location.
Austin & McDonald's No. 4 Millsaps, NW cor. Sec. 16-17-6	Location.
Palmer Corp.'s No. 1 Miles, 1,320 ft. S and 680 ft. E NW cor. NE Sec. 11-17-6	Drlg. red beds 2,703 ft.

SABINE PARISH

R. L. Gay, trustee's No. 4 Bowman-Hicks, SE cor. NW SE Sec. 14-7-14	Derrick.
R. L. Gay, trustee's No. 1 Long-Bell Lbr. Co., NE cor. NW NW Sec. 26-8-14	Tested dry 1,852 ft; drlg. 2,050 ft.
R. L. Gay, trustee's No. 2 Sabine Lumber Co., Sec. 23-7-14	Cmtd. 8-in. 2,109 ft.
A. H. Tarver's No. 1 Long-Bell Lumber Co., NW cor. SW NW Sec. 29-8-13	Arranging for drill stem test; total depth 3,500 ft.

UNION PARISH

J. E. Cammattee and others' No. 2 Tugwell, NE cor. NE NW Sec. 21-22-1e	S.D. 2,250 ft.
H. C. McDonald's No. 2 U. S., NW cor. SW NE Sec. 18-23-1e	Shut down 1,500 ft.
Sundby and others' No. 1 Security Trust, SE cor. Sec. 6-23-1e	Shut down waiting orders; total depth 2,300 ft.

ARKANSAS

CALHOUN COUNTY

Phillips Pet. Co.'s No. 1 Freeman-Smith Lumber Co., 300 ft. S, 300 ft. W, NE cor. SW NW, Sec. 25-16-13	Location.
Ohio Oil Co.'s No. 1 Stout Lumber Co., NW cor. SW Sec. 31-14-12	Cmtd. 12½-in. 380 ft; drlg. 1,150 ft.

CLARK COUNTY

Wm. Henry, trustee's No. 1 Clark, Sec. 34-9-21	Shut down 1,200 ft.

COLUMBIA COUNTY

Arpeco Syndicate's No. 1 Dennis, Sec. 11-20-23	Drlg. gumbo 3,270 ft.
T. R. Brown, trustee's No. 1 Spencer, Sec. 18-18-22	Cmtd. 10-in. 330 ft; drlg. 410 ft.
Helena Oil & Gas Co.'s No. 1 Pickler, Sec. 19-19-22	Shut down 2,762 ft.

FAULKNER COUNTY

Gold Creek Oil & Gas Co.'s No. 1 Stermer, Sec. 17-4-13	Cemented 6-in. 3,800 ft.

GRANT COUNTY

Jones & Watkins' No. 1 Meek, Sec. 5-4-11	Shut down 1,400 ft.

LINCOLN COUNTY

Pine Prairie Oil & Gas Co.'s No. 1 Carter	Shut down 2,176 ft.

LITTLE RIVER COUNTY

Grotte and others' No. 1 Allen, Sec. 31-12-31	Shut down 2,941 ft.

LOGAN COUNTY

Arkansas Natural Gas Corp.'s No. 1 Hanna, Sec. 26-7-23	Setting 8¼-in. 2,685 ft.

MADISON COUNTY

Independent Oil & Gas Co.'s No. 1 Banks & Teague, Sec. 6-16-27	Granite 2,500 ft; plugged back to 600 ft; to test gas sand.

OUACHITA COUNTY

Copenhaven and others' No. 1 Warnick, Sec. 2-15-17	Derrick.
Flaucher and others' No. 1 Buck, Sec. 7-15-17	Shut down 2,465 ft.
Lohman and others' No. 1 Fogle, Sec. 18-14-16	Shut down 1,540 ft.
Phillips Petroleum Co. and others' No. 1 Eagle Mills, Sec. 11-12-16	Running to bottom; T.D. 2,502 ft.
Sundby and others' No. 1 Farris, SW cor. NW SE Sec. 27-15-15	Arranging to set 6⅝-in. to test 6 ft. of sand; T.D. 2,066 ft.
Timberlake and others' No. 1 Wright, Sec. 25-14-18	Shut down waiting orders 2,907 ft.
Wesson and others' No. 1 Booth, Sec. 12-15-19	Shut down 2,203 ft.

UNION COUNTY

Sam Arrendale's No. 1 Gallagher & Nelson, 200 ft. N and W SE cor. Lot 5, Sec. 18-18-17	S.D. for fuel; T.D. 887 ft.
W. M. Coates, trustee's No. 1 McDuffie, Sec. 32-19-17	Sidetracking core head; T.D. 3,785 ft.
O. W. Estes' No. 1 Ramsey, NW cor. NW SW Sec. 24-17-14	Derrick.
E. L. Foster and others' No. 1 Murphy Land Co., Sec. 22-17-17	Shut down 1,400 ft.
Johnson-Gummer Co.'s No. 1 Cargile, Sec. 4-18-13	Coring at 2,958 ft.
Root Refineries, Inc.'s No. 1 Oliver, NW cor. SE NW, Sec. 18-17-13	Spudded July 5; 10-in. 172 ft; drlg. 375 ft.
McDonald Brothers' No. 1 Mayfield, Sec. 29-19-15	Shut down 2,210 ft.
Ohio Oil Co.'s No. 1 Stout Lbr. Co. Acct. 2, 330 ft. S, 330 ft. W, NE cor. NW, Sec. 30-16-13	Derrick.
Stark and others' No. 1 Ainsworth, NE cor. NW NE Sec. 8-19-16	Derrick.

T. J. Woodley's No. 1 First National Bank, NW cor. Sec. 34-19-18 ..... Derrick.

WASHINGTON COUNTY

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30 ..... Cemented 6-in. 1,320 ft.; shut down 1,342 ft.

Lincoln Leaseholding Syndicate's No. 1 Lincoln, Sec. 30-15-32 ..... Drlg. 500 ft.

WHITE COUNTY

Letona Syndicate's No. 1 Letona, SE cor. NW SW Sec. 35-9-8 ..... Cemented 6⅝-in. 2,975 ft.

EAST TEXAS

BOWIE COUNTY

Hooks Oil & Gas Co.'s No. 1 Lee Roseberry, L. T. King Sur. ..... Temp. abandoned, total depth 3,086 ft.

CAMP COUNTY

Rogers and others' No. 1 Enfelt, R. M. Montgomery Sur. ..... Tested dry at 1,870 ft.; shut down 1,920 ft.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossler, E. Hughhart Sur. .. Claim show of oil and gas; shut down 1,893 ft.

Shad Harper's No. 1 W. R. Garland, J. Wagley Sur. .... Shut down 1,862 ft.

Johnson Petroleum Co.'s No. 2 Randolph Edward Dean Sur. ..... Shut down 1,440 ft.

SHELBY COUNTY

Chapperall Oil Co.'s No. 2 Holt, Matthew Moore Sur. .. Shut down for orders 3,004 ft.

Gulf Refining Co.'s No. 1 Carraway, J. H. Patterson Sur. ..... Bailed down 4,950 ft; no show; T.D. 5,112 ft.

MISSISSIPPI

ALCORN COUNTY

Alcorn Petroleum Co.'s No. 1 Matthews, SE cor., Sec. 14-2s-7e ..... Shut down 1,982 ft.

CHICKASAW COUNTY

Hightower & Golson's No. 1 Flemming, NE cor. Sec. 20-13-3 ..... Shut down 1,100 ft.

CLAIBORNE COUNTY

Ben W. White's No. 1 Shannon, NE cor. Sec. 36-10-4 ..... Rebuilding derrick; total depth 2,004 ft.

HINDS COUNTY

Big Black Oil Co.'s No. 1 Southern Christian Institute, NW cor. Sec. 30-6-4 ..... Derrick pattern.

Edwards Oil Co.'s No. 4 Lewis, SE cor. SW Sec. 36-16-5 ..... Derrick pattern.

Harry Gerson's No. 1 Edward House, Blk. 16, West Jackson Subdivision City of Jackson in Twp. 5n, Range 1e ..... Derrick.

Oscar Brown's No. 1 Riverside (formerly Hennessee and others), SE cor. SE SW Sec. 23-16-5 ..... Set 12½-in. 80 ft.; shut down 1,650 ft.

Mrs. Reeder and others' No. 1 State, SE cor. NW NW Sec. 25-6-1e ..... Shut down 2,895 ft.

HUMPHREYS COUNTY

E. C. Steele and others' No. 1 C. B. Box, SE cor. SE NE, Sec. 25-14-4w ..... Set 12½-in. 60 ft.; shut down.

LAUDERDALE COUNTY

Lauderdale Oil & Gas Co.'s No. 1 Lackey, 990 ft. S and E NW cor. NE Sec. 33-8-18 ..... Rigging up.

Meridian Oil & Gas Co.'s No. 1 Hauser, Sec. 33-8-18 .... Coring 1,630 ft.

J. R. Smith Oil Co.'s No. 1 C. F. Craig, Sec. 2-6-14 ..... Derrick.

MONROE COUNTY

Amory Development Co.'s No. 1 Bourland, Sec. 2-13-19 .. Fishing 12 joints casing; total depth 2,487 ft.

Amory Natural Gas Co.'s No. 2 Carter, 1,425 ft. N and 50 ft. E SW cor. SE Sec. 7-17-13 ..... Cemented 6-in. 2,368 ft.; coring rock 2,381 ft.

Amory Petroleum Co.'s No. 1 Hall, Sec. 8-13-19 ..... Waiting orders 3,040 ft.

Arkansas Natural Gas Corp.'s No. 1 Rye ..... Bailing; T.D. 3,378 ft.

Park Bowser and others' No. 1 Cowart, second hole, Sec. 2-12-19 ..... Shut down 30 ft.

WARREN COUNTY

El Dorado Oil Co.'s No. 1 Dornbush, Sec. 8-18-5 ..... Rigging up.

YALOBUSHA COUNTY

Philp Brothers' No. 1 James, Sec. 20-11-5 ..... Shut down 2,408 ft.

TENNESSEE

DECATUR COUNTY

Standard Oil Co. of Louisiana's No. 1 Wyatt ..... Drlg. 1,239 ft.

Chester County Oil Co.'s No. 1 Montgomery ..... Cemented 6-in. 1,040 ft.

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 55)

NORTH LOUISIANA

BOSSIER PARISH—CARTERSVILLE

Company, farm and location— Remarks:

Delaware-Louisiana Development Co.'s No. 4 Bollinger, Sec. 38-23-11 ..... Plugged back to 3,150 ft. and set 4½-in.; T.D. 3,922 ft.

BOSSIER—ELM GROVE

J. F. Palmer's No. 4 McCann, Sec. 31-16-11 ..... S.D. 1,910 ft.

Palmer Corp.'s No. 2 McDade, 660 ft. N, 660 ft. E, SW cor. NW SW, Sec. 13-17-12 ..... Location.

CADDO PARISH—MOORINGSPORT

Falcon Oil Co.'s No. 1 Nunley, 3,212 ft. N and 5,591 ft. E SW cor. Sec. 29-20-15 ..... Spudded July 4; cmtd. 10-in. 62 ft; drlg. 850 ft.

CADDO PARISH—DIXIE

Gold and Sklar's No. 2 Hunter, 330 ft. S and W, NE cor. SW NE, Sec. 17-19-14 ..... Derrick.

Gulf Refining Co.'s No. 3 Oden, 990 ft. W and 330 ft. S NE cor. Sec. 18-19-14 ..... Arranging to pump; T.D. 2,411 ft.

Gulf Ref. Co.'s No. 5 Oden, 990 ft. S, 990 ft. E, NW cor. NE, Sec. 18-19-14 ..... Location.

Gulf Ref. Co.'s No. 1 Hunter, 990 ft. N, 990 ft. W, SE cor. NE, Sec. 17-19-14 ..... Derrick.

Gulf Ref. Co.'s No. 2 Hunter, 330 ft. W, 250 ft S, C, Sec. 17-19-14 ..... Location.

Ohio Oil Co.'s No. 2 Hunter, SW cor. NE NW Sec. 17-19-14 ..... Coring 2,380 ft.

Ohio Oil Co.'s No. 3 Hunter, 330 ft. N and E, SW cor. NW NE, Sec. 17-19-14 ..... Rig up.

Ohio Oil Co.'s No. 4 Hunter, 330 ft. N and W, SE cor. NW NE, Sec. 17-19-14 ..... Location.

Palmer Corp.'s No. 1 Hunter, SW cor. Sec. 8-19-14 .... Arranging to pump; T.D. 2,404 ft.

Palmer Corp.'s No. 2 Hunter, 990 ft. E, 330 ft. N, SW cor. Sec. 8-19-14 ..... Rig up.

Ray-Dawes Drilling Co.'s No. 1 Hunter, NW cor. NE Sec. 8-19-14 ..... Tested 2 joints mud 2,393-2,436 ft; no show; coring 2,452 ft.

Standard Oil Co.'s No. 2 Henderson, SE cor. Sec. 8-19-14 ..... Standing 250 ft. above liner in oil; waiting on standard rig to pump; T.D. 2,407 ft.

Standard Oil Co.'s No. 3 Henderson, 220 ft. N, 330 ft. W, SE cor. SW SE, Sec. 7-19-14 ..... Derrick.

Standard Oil Co.'s No. 3 Hunter, 330 ft. S, 330 ft. E NW cor. SE NW, Sec. 17-19-14 ..... Spudded July 3; cmtd. 10-in. 97 ft; drlg. 725 ft.

Standard Oil Co.'s No. 5 Hunter, Sec. 17-19-14 ..... Waiting on standard rig to pump; T.D. 2,411 ft.

Standard Oil Co.'s No. 6 Hunter, 330 ft. S, 330 ft. W, NE cor. NW NW, Sec. 17-19-14 ..... Cmtd. 10-in. 102 ft; drlg. sand rock 1,926 ft.

Standard Oil Co.'s No. 7 Hunter, 330 ft. S, 330 ft. W, NE cor. SE NW, Sec. 17-19-14 ..... Derrick.

Standard Oil Co.'s No. 3 Oden, 330 ft. S, 330 ft. W, NE cor. SW NE ..... Location.

CADDO—OIL CITY

W. D. Chew's No. 5 fee, Sec. 33-21-16 ..... Drilling in with cable tools; T.D. 2,300 ft.

W. D. Chew's No. 1-B fee, Sec. 33-21-16 ..... Arranging to pump; T.D. 1,855 ft.

W. D. Chew's No. 1-C Levee Board, 2,490 ft. W, 1,470 ft. S, NE cor., Sec. 34-21-16 ..... Rig up.

Gulf Ref. Co.'s No. 17-A Levee Board, 1,126 ft. S, 150 ft. E, NW cor. NE, Sec. 34-21-16 ..... Cmtd. 10-in. 42 ft; drlg. 1,772 ft.

Magnolia Petroleum Co.'s No. 18 Doan-Thigpen, SE cor. SW SE Sec. 6-20-15 ..... Drlg. anhydrite 3,444 ft.

Magnolia Pet. Co.'s No. 4 Levee Board, 330 ft. S, 330 ft. E, NW cor. NE NE, Section 7-20-15 ..... Rig up.

C. B. Moore's No. 5 Dillon, SW cor., Sec. 22-20-15 .... Plugged back to 2,188 ft; T.D. 2,202 ft.

Shreveport Oil Corp.'s No. 1 Cheshire, NE Sec. 32-21-15 ..... Plugged back to 1,640 ft; standing 900 ft. in oil; waiting on standard rig; T.D. 2,156 ft.

Shreveport Oil Corp.'s No. 1 Guy, NW NE Sec. 32-21-15 ..... Tested S.W. with show of oil; S.D. for orders; T.D. 2,300 ft.

Simplex Oil Co.'s No. 7 Youree-Randolph, 660 ft. N and 660 ft. W C Sec. 13-20-15 ..... Tested 50,000 ft. gas at 2,300 ft; S.D. for orders; T.D. 2,326 ft.

CADDO PARISH—LEWIS

Snake Creek Oil Co.'s No. 1 Levee Board, SW NW Sec. 9-21-16 ..... Tested dry with show of oil and S.W; S.D.; T.D. 2,328 ft.

CADDO PARISH—PINE ISLAND

Dixie Oil Co.'s No. 92 Dillon, SW NW Sec. 13-21-15 .... Bailed dry 6,208 ft; coring lime and shell 6,237 ft.

Dixie Oil Co.'s No. 100 Dillon, 1,800 ft. S, 415 ft. E, NW cor., Sec. 13-21-10 ..... Spudded July 8; cmtd. 10-in. 41 ft; drlg. 180 ft.

Dixie Oil Co.'s No. 5 Hobbs, SE cor. NW SE Sec. 21-21-15 ..... S.D. 1,673 ft.

Magnolia Petroleum Co.'s No. 18 Dillon, NW cor. Sec. 24-21-15 ..... Cored red shale 4,712 ft.

CLAIBORNE PARISH—HOMER

Oakes and others' No. 1 Richardson, NE SE Sec. 19-21-7 ..... S.D. 1,112 ft; in litigation.

CLAIBORNE PARISH—HAYNESVILLE

Smitherman & McDonald and others' No. 1 Miller, 825 ft. S and 660 ft. E C Sec. 17-23-8 ..... S.D. for orders; T.D. 4,780 ft.

LASALLE PARISH—URANIA

O. W. Clark's No. 7 Tullos, SE SW, Sec. 23-10-1e ..... Standing 500 ft. in oil from 6 ft. of sand; T.D. 1,505 ft.

O. W. Clark's No. 8 Tullos, 150 ft. N and 27 ft. W. SE cor. SE SW, Sec. 23-10-1e ..... Spudded July 5; cmtd. 10-in. 110 ft.

Kinney, Hardtner & Randall's No. 1 Kinney, SW SW Sec. 7-10-2e ..... Cmtd. 6-in. at 654 ft; bailed to top of liner; showed gas; S.D for orders; T.D. 675 ft.

Louisiana Oil Refining Corp.'s No. 39-B Tremont, SE NE Sec. 25-10-1e ..... Cmtd. 6-in. 1,513 ft.

Philp and others' No. 1 Urania, SE cor. NE NE Sec. 1-10-1e ..... S.D. waiting orders; T.D. 630 ft.

Randall and others' No. 3 Urania, Sec. 1-10-1e ..... Fish. for bailer; T.D. 675 ft.

G. W. Zoder's No. 3 King, 150 ft. N, 600 ft. W, SE cor. NE, Sec. 13-10-1e ..... Location.

LASALLE PARISH—LITTLE RIVER

Montague Oil Co.'s No. 7 Zenoria Lumber Co., Sec. 11-9-1e ..... Set 8-in. at 825 ft; tested S.W.; waiting orders.

MOREHOUSE PARISH

Consolidated Carbon Co.'s No. 2 J. White, 429 ft. W, 149 ft. N, SE cor., Sec. 16-20-4 ..... Location.

Grecian Bend Gas Co.'s No. 1 Seacrease, 2,025 ft. S, 203 ft. W, NE cor. SE, Sec. 14-20-4 ..... Location.

S. D. Hunter's No. 9 Allison, 660 ft. S, 660 ft. E, NW cor. Sec. 18-20-5 ..... Rig up.

S. D. Hunter's No. 10 Allison, 1,962 ft. E, 660 ft. S, NW cor., Sec. 18-20-5 ..... Location.

Magnolia Pet. Co.'s No. 5 U. S., 620 ft. N, 330 ft. W, SE cor. NE SW, Section 29-21-5 ..... Derrick.

Natural Gas Producing Co.'s No. 15 Tensas, SW NW Sec. 4-22-4 ..... Cmtd. 8-in. at 900 ft.

Southern Carbon Co.'s No. 11 Tensas, SE SE Sec. 31-21-4 ..... Cmtd. 12-in. at 150 ft. and 8-in. at 890 ft.

United Carbon Co.'s No. 2 Patton, 660 ft. N, 660 ft. E, SW cor. SE, Sec. 2-20-4 ..... Location.

United Carbon Co.'s No. 3 Patton, 660 ft. W, 660 ft. S, NE cor. SE, Sec. 2-20-4 ..... Location.

OUACHITA PARISH

Arkansas-Louisiana Pipe Line Co.'s (Ark. Nat. Gas Co.) No. 1 Kate Cole, 570 ft. S, 570 ft. E, NW cor. SW, Sec. 10-18-4 ..... Spudded July 3; cmtd. 12½-in. 180 ft; 8-in. 798 ft.

Austin & Jordan's No. 1 H. M. McGuire, SW SW Sec. 11-18-3 ..... Fishing for bit; T.D. 850 ft.

Bahan & Bahan's No. 1 Frierson, 300 ft. S, 300 ft. E, NW cor. NE, Sec. 18-19-4 ..... Location.

J. B. Bond's No. 1 McEnery, 138 ft. N, 792 ft. E, SW cor. SE, Sec. 19-19-4 ..... Spudded July 3; cmtd. 12-in. 202 ft; 8-in. 860 ft.

J. S. Herkness' No. 7 Bowles, 1,806 ft. E, 3,165 ft. S, NW cor. NE, Sec. 20-20-5 ..... Spudded July 8; drlg. 100 ft.

G. E. Jordan's No. 1 Anding, NW NE Sec. 18-18-5 .... Plugged back to 2,234 ft; T.D. 2,480 ft.

Jordan Drlg. Co.'s No. 4 J. Cole, 2,327 ft. N, 3,201 ft. W, SE cor., Sec. 1-18-3 ..... Derrick.

LaDel Producing Co.'s No. 48 fee, NE cor. NW Sec. 31-20-5 ..... Tested 500,000 ft. gas; waiting orders; T.D. 2,156 ft.

Mack & Pipes' No. 1 Burke, NE NW Sec. 7-18-5 ..... Cmtd. 6-in. 2,162 ft.

Mack & Pipes' No. 1 S. Wallace, 2,010 ft. S, 269 ft. E, NW cor., Sec. ..... Derrick.

Mack & Pipes' No. 1 A. White, 1,043 ft. E, 197 ft. S, NW cor. Sec. 7-18-5 ..... Spudded July 3; cmtd. 10-in. 202 ft; drlg. 2,030 ft.

Magnolia Petroleum Co.'s No. 1 Central Bank, NW NW, Sec. 1-19-4 ..... S.D.; waiting orders; T.D. 185 ft.

Magnolia Pet. Co.'s No. 2 fee 404, 660 ft. N, 660 ft. W, SE cor., Sec. 15-19-5 ..... Location.

Magnolia Pet. Co.'s No. 3 fee 404, 660 ft. N, 660 ft. E, SW cor., Sec. 11-19-5 ..... Location.

Magnolia Petroleum Co.'s No. 4 U. S., SE NW Sec. 20-19-5 ..... Drlg. lime 2,174 ft.

Southern Carbon Co.'s No. 53 fee, SE SE Sec. 23-19-4.. Cmtd. 6-in. 2,175 ft.

Southern Carbon Co.'s No. 54 fee, 660 ft. N, 674 ft. W, SE cor. NE, Sec. 13-19-4 ..... Location.

United Oil & Natural Gas Products Co. of Louisiana's No. 2 Cole, 660 ft. S, 594 ft. E, C, Sec. 36-20-4 ..... Derrick.

United Oil & Natural Gas Products Co. of Louisiana's No. 5 Guthrie, 6,896 ft. N, 6,022 ft. W, cor. Secs. 49, 26, and 25, Sec. 49-20-5 ..... Derrick.

West Virginia O. & G. Co.'s No. 8 W. Va., NW NW, Sec. 8-18-4 ..... Drlg. gumbo 1,600 ft.

H. L. Wood's No. 1 Miller, Sec. 18-18-5 ..... Rig up.

RED RIVER PARISH

J. H. Askew's No. 1 Lockett, NW SW Sec. 32-13-10 .... S.D. 1,630 ft.

Root Refineries, Inc.'s No. 1 Home State & Savings Bank, 330 ft. N, 330 ft. W, C, Sec. 8-13-10 ..... Rig up.

RICHLAND PARISH

W. C. Feazel's No. 1 Haynes & Moore, 275 ft. S, 1,439 ft. E, NW cor. NE, Sec. 17-16-6 ..... Derrick.
W. C. Feazel's No. 1 McCoy, NW SW Sec. 32-16-6 .... Cmtd. 6-in. 2,286 ft.
W. C. Feazel's No. 2 McCoy, 330 ft. E, 660 ft. N, SW cor., Sec. 33-16-6 ..... Location.
Feazel, Bendel & Brown's No. 1 J. H. Hunter, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 28-16-6 ..... Location.
Hope Producing Co.'s No. 1 Standard Oil, NE NE, Sec. 28-17-6 ..... Drlg. 2,290 ft.
Hope Producing Co.'s No. 1 Eubanks, NW SE Sec. 26-17-6 ..... Cmtd. 6-in. 2,285 ft.
S. R. Humble's No. 1 Binion & Sartor, 660 ft. S, 660 ft. E, NW cor. SW, Sec. 22-17-6 ..... Rig up.
International Gas Products Co.'s No. 1 Beck, 660 ft. N, 660 ft. E, SW cor., Sec. 25-16-6 ..... Spudded July 3; cmtd. 12½-in. 198 ft; 8-in. 860 ft.
Magnolia Pet. Co.'s No. 2 Hatch, 180 ft. N, 660 ft. W, SE cor. NE SE, Sec. 2-15-5 ..... Location.
Magnolia Pet. Co.'s No. 3 C. M. Noble, 370 ft. S, 105 ft. W, NE cor. SE NE, Sec. 35-16-5 ..... Cmtd. 10¾-in. 909 ft.
Magnolia Pet. Co.'s No. 4 C. M. Noble, 400 ft. S, 660 ft. W, NE cor. SE NE, Sec. 35-16-5 ..... Location.
M. L. Meredith's No. 1 Holdness, 1,980 ft. S, 990 ft. W, NE cor., Sec. 15-16-6 ..... Derrick.
Northern Louisiana Natural Gas Co.'s No. 2 Boykin, 1,034 ft. E, 911 ft. N, SW cor. SE, Sec. 20-17-6 ..... Derrick; rig moved.
Northern Louisiana Natural Gas Co.'s No. 3 Boykin, 733 ft. E, 911 ft. N, SE cor., Sec. 20-17-6 ..... Cmtd. 10-in. 908 ft.
Palmer Corp.'s No. 1 Eubanks, 1,100 ft. N, 350 ft. E, SW cor. SE NW, Sec. 26-17-6 ..... Location.
Palmer Corp.'s No. 1 Hardwick, SW SE Sec. 16-17-6 .... Drlg. 2,424 ft.
Palmer Corp.'s No. 1-A Jones, 660 ft. S, 660 ft. E, NW cor. NE SW, Sec. 22-17-6 ..... Spudded July 5; cmtd. 12½-in. 172 ft.
Palmer Corp.'s No. 1 Whitten, NW NE Sec. 21-17-6 ..... Tested 500,000 ft. gas; arranging to deepen; T.D. 2,455 ft.
Southern Carbon Co.'s No. 1 Binion & Sartor, 660 ft. N, 1,320 ft. E, SW cor. SE, Sec. 21-17-6 ..... Cmtd. 8-in. 887 ft; drlg. 955 ft.
Southern Carbon Co.'s No. 1-B Tegola, SW NE Sec. 5-15-6 ..... Tested 250,000 ft. gas; waiting orders; T.D. 2,461 ft.

UNION PARISH

Bahan & Bahan's No. 1 Peake, 1,007 ft. S, 126 ft. W, NE cor., Sec. 17-20-4 ..... Location.
Bahan & Bahan's No. 2 Peake, 1,425 ft. S, 100 ft. W, NE cor., Sec. 17-20-4 ..... Location.
Bahan & Bahan's No. 1 School fee, formerly No. 1 Barr, NW NW Sec. 10-20-3 ..... Derrick; report cmtd. 6-in. 2,085 ft. in error; crossed with Friend & Bahan's No. 1 Barr, Sec. 11-20-4; completed July 7.
E. S. Hall's No. 1 Spencer, SE SE Sec. 36-21-3 ..... Drlg. 2,081 ft.
Harrell & Jones' No. 1 Stripling, NE NE Sec. 17-20-4 .. Drlg. out bridge; T.D. 2,150 ft.
Imperial Oil & Gas Products Co.'s No. 1-A fee, NW NW Sec. 30-20-4 ..... Cmtd. 6-in. 2,084 ft.
Interstate Natural Gas Co.'s No. 1 Parks, NW NW Sec. 23-20-3 ..... Bailing casing.
Natural Gas Producing Co.'s No. 3 Hale, 1,880 ft. S, 660 ft. W, NE cor., Sec. 11-21-3 ..... Rig up.

WEBSTER PARISH—COTTON VALLEY

Magnolia Petroleum Co.'s No. 1 McCook & Hibbler, C SW SW Sec. 22-21-10 ..... Cored red shale 6,329 ft.
Magnolia Petroleum Co.'s No. 5-A Robbins, SE SW Sec. 21-21-10 ..... Cmtd. 10¾-in. 3,503 ft.
Ohio Oil Co.'s No. 43 Bodcaw, C NW SW Sec. 24-21-10.. Cmtd. 6¼-in. 4,240 ft.
Ohio Oil Co.'s No. 44 Bodcaw, NW NW Sec. 28-21-10.... Cmtd. 8⅝-in. 3,500 ft.
Palmer Corp.'s No. 5 Tillman, NW NW Sec. 27-21-10.... Cmtd. 6⅝-in. 4,234 ft.
Standard Oil Co.'s No. 22-B Bodcaw, Sec. 28-21-10..... Drlg. 3,707 ft.

WEBSTER PARISH—SAREPTA AND SHONGALOO

J. W. Clark, trustee's, No. 1 W. B. Roseberry, W half SE SW Sec. 33-23-9 ..... Cmtd. 6⅝-in. 2,758 ft; T.D. 2,765 ft.
Pat Hudson's No. 1 Slack, SE NE Sec. 1-22-9 ..... S.D. 2,592 ft.
W. M. Kemp et als' No. 1 R. D. Campbell, 250 ft. S, 250 ft. W, NE cor. NW NE, Sec. 11-22-10 ..... Cmtd. 6-in. 2,645 ft.
Magnolia Petroleum Co.'s No. 1 Adkins, NE NW Sec. 4-22-9 ..... Waiting on standard rig with 1,000 ft. fluid in hole; T.D. 2,665 ft.
Magnolia Petroleum Co.'s No. 1 Sally Coyle, SE NE Sec. 2-22-11 ..... Tested dry 2,692 ft; tested oil show 2,695 ft; waiting orders.
Magnolia Pet. Co.'s No. 1 Roseberry, 330 ft. N, 330 ft. W, SE cor. NW SE, Sec. 19-23-9 ..... Spudded July 3; cmtd. 13⅜-in. 399 ft; drlg. 857 ft.
Woodmansee et als' No. 1 Boyd, 200 ft. S, 200 ft. E, NW cor. SE SW, Sec. 3-22-11 ..... Derrick.

WINN PARISH—URANIA

Gardner, Harter & Brown's No. 12 Harper, 200 ft. E, 150 ft. S, NW cor. NE NW, Sec. 26-10-1e ..... Location.

ARKANSAS
NEVADA COUNTY

Wright Oil Co.'s No. 4 Groves, Sec. 13-14-21..... Waiting on standard rig; T.D. 1,140 ft.

OUACHITA COUNTY—MOUNT HOLLY

McDonald Brothers' No. 3-B Wilson, SW NW Sec. 25-15-18 ..... Cmtd. 6-in. 2,785 ft.

OUACHITA COUNTY—SMACKOVER

L. H. Hamilton's No. 1 Arnold & Doyle, SE SE Sec. 23-15-16 ..... S.D. 1,550 ft.
Magna Producing Co.'s No. 5-B Linahan, NE cor. SE NW, Sec. 36-15-16 ..... Spudded July 7; drlg. 100 ft.
Skelly Oil Co.'s No. 1 Wood, 300 ft. N, 300 ft. E, SW cor. SE NE, Sec. 34-15-15 ..... Rig up.
Standard Oil Co.'s No. 1 Geo. Powell, 160 ft. N, 160 ft. W, C, Sec. 34-15-15 ..... Spudded July 6; cmtd. 10-in. 135 ft; drlg. 560 ft.

UNION COUNTY—CHAMPAGNOLLE

Bailey & Trimble's No. 1 El Dorado Realty Co., Sec. 7-17-13 ..... Junked at 768 ft; skidding derrick.
O. W. Estes' No. 1 Hargett, 200 ft. N, 200 ft. E, SW cor. SW Sec. 13-17-14 ..... Location.
Gann and others' No. 1 Doss, Sec. 10-17-15 ..... Fish. for liner 2,864 ft.
Gann and others' No. 1 Schmidt, NW NW Sec. 15-17-14. Derrick.
Magnolia Pet. Co.'s No. 1 Gregory, NE cor. SW SW, Sec. 15-17-14 ..... Spudded July 3; cmtd. 15½-in. 250 ft; drlg. 1,150 ft.
Oilwell Corp.'s No. 2-E Perdue, NW NW, Sec. 9-17-15.. Drlg. 3,030 ft.
Rovenger Oil Corp.'s No. 3-B Perdue, 330 ft. S, 330 ft. W, NE cor. SE NE, Sec. 9-17-15 ..... Arranging for drill stem test 2,600-14 ft.
Rushing and others' No. 1 Lynn, Sec. 7-17-13..... Tested S.W. 3,216-22 ft; arranging to test 3,296-3,309 ft.

UNION COUNTY—EL DORADO

J. P. Hawkins' No. 1 Goodwin, Sec. 8-17-15..... Claim show gas at 2,195 ft; S.D.
Rice et als' No. 1 W. Raltey, 150 ft. S, 150 ft. E, NW cor. SW, Sec. 7-17-15 ..... Rig up.
Weisinger and others' No. 7 Goodwin, Sec. 31-17-15.... Drlg. with cable tools 2,150 ft.

UNION COUNTY—SMACKOVER

E. L. Chapman's No. 1 Purifoy, 585 ft. W, 150 ft. S, NE cor. NW SW, Sec. 2-16-16 ..... Swbng. to test 95 ft. broken formation; T.D. 2,150 ft.
Lovett et als' No. 1 Goodwin & Stone, Sec. 3-16-16..... Coring 2,800 ft.
A. H. Ramage's No. 1-A James, Sec. 6-16-15..... Installing vacuum system; T.D. 1,984 ft.

EAST TEXAS
MARION COUNTY

Pettit Oil Co.'s No. 3 Rives, N. G. Noll Sur. ..... Spudded June 22; cmtd. 10-in. 48 ft; 6-in. 2,132 ft; drlg. 2,180 ft.

HARRISON COUNTY

Mason et als' No. 1 Dean, J. W. Crofts Sur. ..... S.D. for orders; T.D. 2,165 ft.

PANOLA COUNTY

Calatex O. & G. Co.'s No. 4 W. C. Agurs, J. Womack Sur.. Cmtd. 6-in. 2,987 ft.
Eureka Nat. Gas Co.'s No. 1-B Gully, Jas. Matthews Sur.. Drlg. 2,125 ft.
Magnolia Pet. Co.'s No. 4 T. C. Adams, E. Jones Sur. .. Drlg. chalk 1,510 ft.
Magnolia Pet. Co.'s No. 3 Ella Barker, B. C. Jordan Sur.. Drlg. shale 2,235 ft.
Magnolia Pet. Co.'s No. 16 Carrie G. Steele, B. C. Jordan Sur. ..... Drlg. shale 1,934 ft.
Natural Gas Prod. Co.'s No. 9 Roquemore, B. C. Jordan Sur. ..... Fish. for drill stem; T.D. 2,286 ft.
Nemours Corp.'s No. 4 Tiller, E. F. Mitcheson Sur. ..... Drlg. 6-in. plug 2,265 ft; T.D. 2,816 ft.
The Texas Co.'s No. 12-A Adams, S. B. Lacy Sur. ..... Cmtd. 6-in. 949 ft.
Paul C. Warren's No. 1 F. M. McNeese, A. Booker Sur. .. Derrick.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 59)

DUVAL COUNTY

Magnolia Petroleum Co.'s No. 1 Corbett, Sur. 96 ..... Rig.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlaw..... Shut down 2,050 ft.

FAYETTE COUNTY

Magnolia Petroleum Co's No. 1 Henry Gully ..... Rigged up.
W. J. Kelly's No. 1 Burke..... Changing to heavier rig 280 ft.
Marshall & Moore's No. 1 John A. Kerr..... Drlg. 2,485 ft.

GONZALES COUNTY

Alexander & Smith's No. 1 Billings..... Shut down 600 ft.
Joe Bruner's No. 1 R. D. and J. C. Miller..... Moving in boiler 2,712 ft.
Crown Petroleum Co.'s No. 1 Hattenback..... Rebuilding derrick 2,257 ft.
Finnell & Elam's No. 1 Robinson, Liverpool Survey..... Set additional string csg. 1,040 ft.
Hoffman and others' No. 1 Steubing, John Smith Survey.. Location.
Linderman Brothers' No. 1 F. H. Frampton..... Drlg. 1,000 ft.
Fort Bend Oil Co.'s No. 1 C. E. Ham..... Drlg. 2,400 ft.
Frank Sorrell's No. 2 Wilkenson..... Standing 174 ft.

GUADALUPE COUNTY

W. E. Clark and others' No. 1, Survey M. Miller..... Location.
L. W. Conner and others' No. 1 William Weinaug..... Drlg. 2,125 ft.
Grayburg Oil Co.'s No. 2 Sophie Haensel..... Location.
A. G. Kifer's No. 1 B. B. Dix..... Standing 1,050 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Ramon Gonzales..... Location.
Miller Brothers' No. 1 Gib Springs..... Tested 2,624 ft., tester and joint above came up covered with oil and dobe.
T. H. Poole's No. 1 C. Woehler, John King Survey..... Drlg. 2,354 ft.
Sinclair Oil & Gas Co.'s No. 1 Ed Tewes..... Drlg. 200 ft.
L. W. Stieren's No. 1 S. H. Herman, Ragsdale Survey... Standing 1,233 ft.
The Texas Company's No. 1 Dallas Wilson, Sur. Darst... Running casing; resumed drilling.
Tidal Oil Co.'s No. 1, Survey Williamson..... Location.
W. J. Walton's No. 1 G. Nolte..... Set casing 1,690 ft.

JIM HOGG COUNTY

Deep Rock Oil Co.'s No. 1 Kelsey ..... Rigging up.

KARNES COUNTY

Hurador Oil Co.'s No. 1 W. E. Porter..... Waiting on fuel oil 2,060 ft.
Scott Townsend and others' No. 1 Ruckman..... Drlg. 2,340 ft.

KERR COUNTY

McMan Oil & Gas Co.'s No. 2 Walter Schreiner..... Location.
L. R. Page and Associates' No. 1 Real..... Drlg. 1,040 ft.

KIMBLE COUNTY

Carl L. Bryant's No. 1 C. E. Lambert..... Ready to spud in.
H. A. McLean & Jamison's No. 1 R. F. Cannon..... Oil showing, 600 ft.
J. B. Lindsay's No. 1 G. C. Anderson..... Setting 15½-in. casing.

KINNEY COUNTY

Lloyd Oil Co.'s No. 1 G. B. Moore, Survey 117..... Waiting for pipe 1,600 ft.

LASALLE COUNTY

J. G. Nix's No. 1 Coleman, Survey 68..... Rigging up.

MAVERICK COUNTY

Ryan Consolidated Petroleum Co.'s No. 2 Indio Ranch.... Drlg. 4,900 ft.
Rycade Oil Co.'s No. 3 Chittim..... Drlg. 4,060 ft.
Rycade Oil Corp.'s No. 4 J. M. Chittim..... Drlg. 3,200 ft.
Rycade Oil Co.'s No. 4 Sullivan..... Drlg. 3,440 ft.
Rycade Oil Corp.'s No. 5 Chittim ..... Clearing land for rig.
The Texas Company, 5 miles west Darling Switch..... Moving in material.

MEDINA COUNTY

Pat Armstrong's No. 1 C. W. Butts..... Derrick.
California-Medina's No. 1 Rothe..... Drlg. 3,426 ft.
Donaldson Oil Co.'s No. 2 Adams..... Location.
Lynch and others' No. 1 Mott..... Standing 580 ft.
Pearson Oil Co.'s No. 2 Irrigated Farms, Blk. 3..... 1,000 ft.; drilling in.
Rawdon-Hughes and others' No. 1 Bendele, Survey 595.. Drlg. 815 ft.
Rawdon-Hughes and others' No. 1 A. L. Haegelin..... Location.
Rawdon-Hughes and others' No. 2 Bendele..... Standing 937 ft.
Cecil Switzer's No. 1 Zerr..... Fishing 3,700 ft.
W. W. Woodworth's No. 1 Reinhart, J. Hall Survey..... Shut down 1,964 ft.

MILAM COUNTY

J. M. Burkhead's No. 1 C. Weigham..... Drlg. 1,690 ft.
E. L. Chapman's No. 1 E. G. Knight..... Drlg. 400 ft.
E. L. Chapman's No. 1 J. M. Gilchrist..... Drlg. 2,343 ft.
H. E. Elliott and others' No. 1 J. C. Moore..... Drlg. 2,000 ft.
Hill & Bonwell's No. 1 B. Booher, James Welch Survey.. Drlg. 2,007 ft.
Wilson and others' No. 1 Johnson & Stiles..... Location.
Elbert Williams' No. 1 Tom Shigut..... Shut down 2,000 ft.
Milam Oil & Gas Co., 4 miles southeast of Rosebud..... Drlg. 600 ft.
A. H. Wray's No. 1 D. D. Fowler..... Setting casing 302 ft.

McMULLEN COUNTY

Natt Holman's No. 1 Shiner, H. M. Brewer Survey..... Standing 790 ft.

NUECES COUNTY

Nueces River Basin Dev. Co.'s No. 1 F. C. Allen..... Drlg. 3,760 ft.
Pearson and others' No. 1 Bluntzer..... Standing 3,507 ft.
R. & G. Corp.'s No. 1 Emily Wright Perkins..... Standing 3,510 ft.
R. & G. Corp.'s No. 1 Roberts..... Location.
R. & G. Corp.'s No. 1 Ragland..... Standing 3,003 ft.

SAN PATRICIO COUNTY

Magnolia Petroleum Co.'s No. 1 C. Freeman, Sec. 57 .... Rig.
Houston Gulf Gas Co.'s No. 3 Welder..... Drlg. 3,788 ft.
Magnolia Petroleum Co.'s No. 1 Miller Ranch..... Derrick.

STARR COUNTY

Ohio Oil Co.'s No. 1 Bass, Por. 76, Blk. 71 ..... Drilling.
U. S. Oil & Gas Co.'s No. 1 Kelsey, Por. 76, Blk. 11 ..... Standing.
The Texas Company's No. 1 V. C. de Guerra, Por. 68 .... Drlg. 3,790 ft.

VICTORIA COUNTY

Humble Oil & Ref. Co.'s No. 3-A J. J. Welder..... Drlg. 3,124 ft.

WEBB COUNTY

O. W. Killam's No. 6 Billings ..... Drlg. 1,000 ft.
G. S. Lumpkin's No. 1 H. Yeager, Por. 33-34-35 ..... Location.
Usher Carson's No. 2 D. Benavides, Sur. 1,613 ..... Standing 1,005 ft.

WILLIAMSON COUNTY

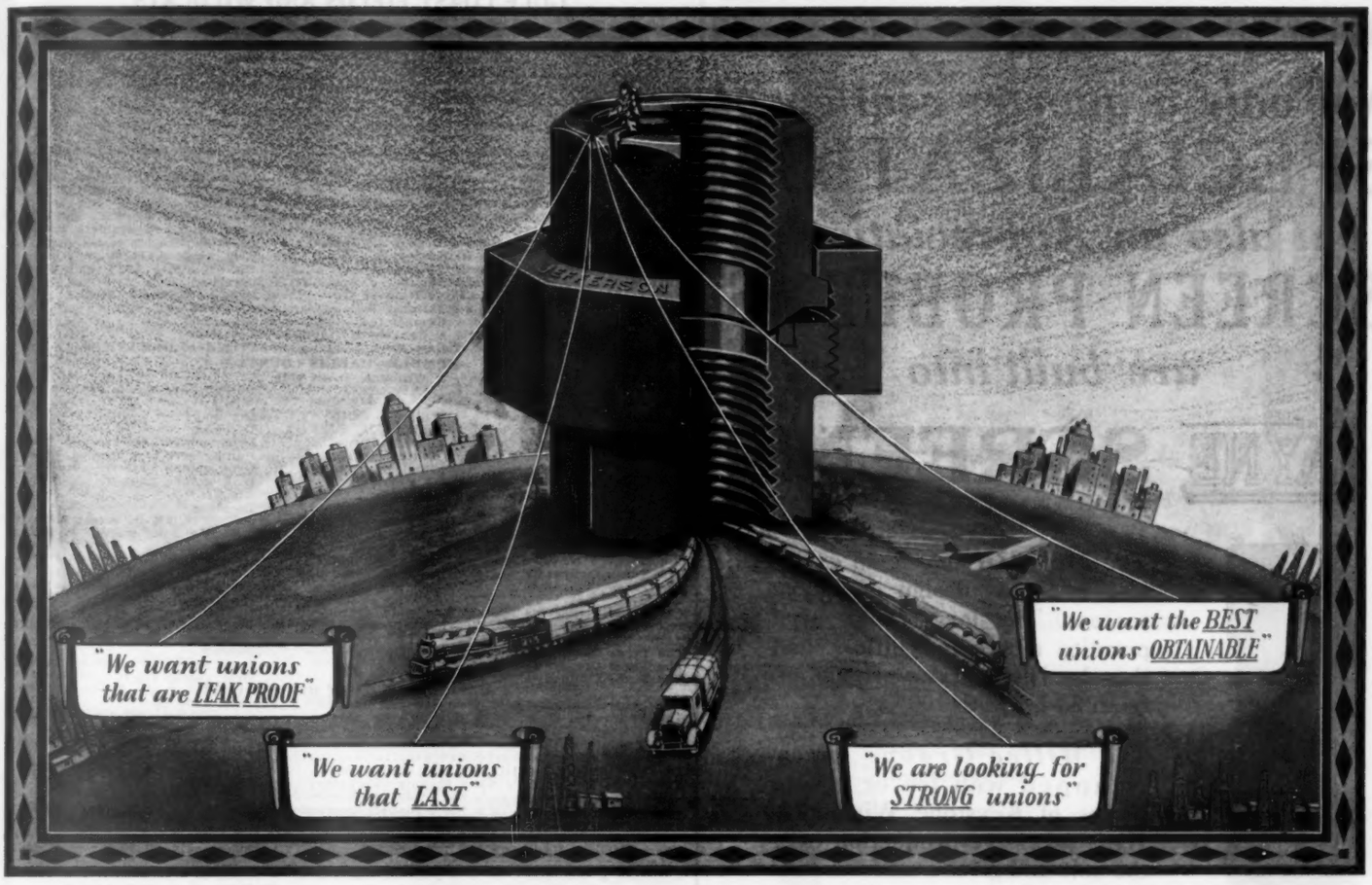
J. C. Hawkins, 1½ miles northwest discovery well..... Location.

ZAPATA COUNTY

National Oil Co.'s No. 1 D. B. Adams ..... Standing 690 ft.
Buck & Coursey's No. 1 Garza, Blk. 47 ..... Fishing 953 ft.
Buck & Coursey's No. 1 Trevino, Sur. 1 ..... Drlg. 200 ft.

ZAVALA COUNTY

Tritex Oil Co.'s No. 1 Clay Burns..... Drlg. 780 ft.
Tritex Oil Co.'s No. 4 West..... Drlg. 795 ft.
Tritex Oil Co.'s No. 1 Childress..... Drlg. 1,095 ft.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FOR MORE THAN A QUARTER CENTURY

GULF COAST FIELDS AND WILDCATS

(Continued from Page 56)

Humble & Valley's No. 2-B Grawunder ..... Drlg. shale and lime 1,234 ft.
Humble & Valley's No. 3 Reese ..... Drlg. rock 1,418 ft.
Humble & Valley's No. 4 Gotosky ..... Rig.
Humble and Valley's No. 1 Keacheker ..... Rig.

DE WALT—FORT BEND COUNTY

Humble Oil & Refg. Co.'s No. 8 Sugarland ..... Drilled out cement plug 3,582 ft. to test.
Humble Oil & Refining Co.'s No. 3 Nelson ..... Drlg. hard sand and shale 3,542 ft.
Humble Oil & Refining Co.'s No. 4 Nelson ..... Comp. flowing 900 bbls. oil 3,706 ft.
Humble Oil & Refg. Co.'s No. 5 Nelson ..... Location.
Humble Oil & Refg. Co.'s No. 5 Camp ..... Rig.
Humble Oil & Refg. Co.'s No. 7 Brazos ..... Drlg. sand and boulders 383 ft.
Humble Oil & Refg. Co.'s No. 8 Brazos ..... Location.
Humble Oil & Refg.'s No. 1-B Deatherage ..... Drlg. shale 4,114 ft.
Humble Oil & Refining Co.'s No. 9 Brazos ..... Rig.
Humble Oil & Refg.'s No. 3 Hamner fee ..... Location.
Humble Oil & Refining Co.'s No. 5 Hamner fee ..... Drlg. hard lime 1,323 ft.
Humble Oil & Refg. Co.'s No. 6 Hammer fee ..... Location.
Humble Oil & Refg. Co.'s No. 7 Hamner fee ..... Rig.
Humble Oil & Refg. Co.'s No. 2-A Bankers Mortgage ..... Location.
Humble Oil & Refg. Co.'s No. 2 Dew Bros. ..... Drlg. hard lime 1,413 ft.

HUMBLE—HARRIS COUNTY

Humble Oil & Refg. Co.'s No. 1 Williams, south side deep test ..... Pulling strainer to deepen 4,888 ft.
Humble Oil & Refg. Co.'s No. 2 Williams, south ..... Rig up.
Humble Oil & Refg. Co.'s No. 3 Williams ..... Derrick.
Humble Oil & Refg. Co.'s No. 1 Glass, south ..... Drlg. gumbo 1,892 ft.
Marland Oil Co.'s No. 1 Cezeaux, south side ..... Pulling screen to deepen 4,520 ft.
Harvey Smith et al's No. 1 Rosenthall, north side ..... Drlg. gumbo 3,183 ft.
South Texas Petroleum Co.'s No. 7 Morris ..... Drlg. gumbo 1,501 ft.
So. Texas Petroleum Co.'s No. 8 Morris ..... Rig.
So. Texas Petroleum Co.'s No. 1 Lee, south flank ..... Location.
So. Texas Pet. Co.'s No. 1 Burt, south side ..... Set 800 ft. 6⅝-in. screen 5,833 ft.; flowed salt water; trying to shut off.
Sun Oil Co.'s No. 47 River, north side ..... Drlg. 5,100 ft.
The Texas Company's No. 40 Stevenson ..... Drlg. sticky shale 4,180 ft.
The Texas Company's No. 263 Landslide, south ..... Set 4½-in. screen 4,985 ft.; bailing.
The Texas Company's No. 265 Landslide, south ..... Rig.
The Texas Company's No. 21 Wheeler & Pickens, south.. Perforated casing 4,239-42 ft.; bailing.
The Texas Company's No. 266 Landslide ..... Derrick.
The Texas Company's No. 29 C.O.&G. ..... Drlg. sand and boulders 309 ft.
The Texas Company's No. 35 Koehler ..... Drlg. gumbo 735 ft.

BLUE RIDGE—FORT BEND COUNTY

J. S. Abercrombie's No. 9 West-Schenk, old well..... Drlg. 3,673 ft.
Gulf Production Co.'s No. 15 Luscher, east side ..... Sidetracking 4,003 ft.; total depth 4,501 ft.
Gulf Production Co.'s No. 7 Invincible (old well) ..... Drlg. 3,585 ft.
Moody Corp.'s No. 8 West-Schenck ..... Drlg. lime 3,685 ft.
Navarro Oil Co.'s No. 1-C Robinson, northwest ..... Drlg. sticky shale 4,613 ft.
Sinclair Oil & Gas Co.'s No. 3 Blakely (workover) ..... To deepen 4,321 ft.
South Texas Petroleum Co.'s No. 1 Lee (workover) ..... Drlg. 4,312 ft.
South Texas Petroleum Co.'s No. 1 Blakely (workover)... Comp. flowing 800 bbls. fluid; 25 per cent b.s. and water 4,380 ft.

PIERCE JUNCTION—HARRIS COUNTY

Abercrombie & Harrison's No. 1 Ritter ..... Sidetracking 1,686 ft.; total depth 5,558 ft.
Anderson & Plummer's No. 5 Whitehead, old well..... Rigging to deepen.
Gulf Production Co.'s No. 29 Taylor (work-over) ..... Drlg. sandy shale 4,482 ft.
Gulf Production Co.'s No. 30 Taylor, east ..... Drlg. sticky shale 4,609 ft.
Moody Corp.'s No. 2 Calvert, northeast ..... Drlg. rock 3,008 ft.
Moody Corp.'s No. 5-B Settegast ..... Drlg. sticky shale 3,900 ft.
Navarro Oil Co.-Humble Oil & Refg. Co.'s No. 4 Dooley, east ..... Drlg. hard shale and lime 3,235 ft.
Navarro Oil Co.-Texas Exploration Co.'s No. 16 Dooley, east side ..... Drlg. broken lime 3,679 ft.
Navarro Oil Co.'s No. 4-B Cain ..... Drlg. gumbo and lime 3,429 ft.
Pure Oil Co.'s No. 1 Herman estate, southwest ..... To test oil sand 5,054-57 ft.
Rio Bravo Oil Co.'s No. 8-A Settegast (old well) ..... Coring sand 4,415 ft.
Rio Bravo Oil Co.'s No. 14-A Settegast, west ..... Drlg. gumbo and shale 4,375 ft.
Rio Bravo Oil Co.'s No. 15-A Settegast, southwest ..... Set 84 feet screen 4,331 ft.; comp. flowing 2,200 bbls. oil.
Saxet Gas Co.'s No. 2 Herman estate, southwest ..... Drlg. heaving shale 4,970 ft.
Saxet Gas Co.'s No. 3 Herman estate, southwest ..... Sandy shale showing oil 4,313 ft.; set 6⅝-in. casing 4,289 ft.
Smith et al's No. 1 Parsons (old well) ..... Comp. flowing 350 bbls. oil 4,627 ft.
J. F. Barron's No. 3 Fitzsimmons ..... Derrick.
Shaw & Texas Exploration Co.'s No. 2-F Fitzsimmons... Derrick.
Shaw and Texas Exploration Co.'s No. 2-BFitzsimmons (workover) ..... Pumping 40 bbls. oil 4,949 ft.
T. G. Shaw's No. 1 Dooley ..... Drlg. shale and boulders 3,890 ft.

LIBERTY—LIBERTY COUNTY

Empire Gas & Fuel Co.'s No. 3 Goggan ..... Rigged.
Navarro Oil Co.'s No. 5 Baldwin Community ..... Rig.
Pierce & Rogers' No. 1 Pickett ..... Cavity 406 ft.
Sun Oil Co.'s No. 45 Mitchell ..... Drlg. 2,727 ft.
Sun Oil Co.'s No. 46 Mitchell ..... Location.
The Texas Company's No. 5 Green ..... Comp. flowing 1,250 bbls. pipe line oil 3,213 ft.
The Texas Company's No. 3 Pickett ..... Drlg. shale 5,174 ft.
Vacuum Oil Co.'s No. 11 Barrett ..... Pulling screen to deepen 2,817 ft.
Yount Lee Oil Co.'s No. 17 Mitchell ..... Comp. flowing 300 bbls. oil 3,449 ft.

HULL—LIBERTY COUNTY

Daisetta Oil Co.'s No. 1 Wilson ..... To pump 2,043 ft.
Gulf Production Co.'s No. 93 Phoenix ..... Drlg. 2,949 ft.
Humble Oil & Refg. Co.'s No. 11 Hooks-Spell ..... Derrick.
Sun Oil Co.'s No. 10 Carr ..... Drlg. 467 ft.
Republic Production Co.'s No. 24 Dolbear (old well) .... Comp. pumping 275 bbls. net oil 2,278 ft.
Republic Production Co.'s No. 68 Dolbear (old well) ... Drlg. 602 ft.
Republic Production Co.'s No. 107 Dolbear (old well) ... Rig up to work over.
Republic Production Co.'s No. 114 Dolbear, old well..... Rig up to work over.
Republic Production Co.'s No. 139 Dolbear (old well).... Comp. flowing 300 bbls. oil 2,761 ft.
Republic Production Co.'s No. 1 Taylor ..... Shut down 4,504 ft.

BIG CREEK—FORT BEND COUNTY

Benedum & Trees' No. 2 Ahlers ..... Sidetracking 2,762 ft.
Gulf Prod. Co.'s No. 37 Davis (old well) ..... Drlg. 3,759 ft.
Gulf Production Co.'s No. 54 Davis ..... Drlg. gumbo and boulders 3,279 ft.
The Texas Company's No. 2 Wheat (old well) ..... To deepen.
Navarro Oil Co.'s No. 2 Haussler (former gas well)..... Drlg. sticky shale 2,566 ft.
Navarro Oil Co.'s No. 4 Davis ..... Location.

NASH—BRAZORIA COUNTY

Rycade Oil Corp.'s No. 26 Wisdom ..... Drlg. hard sand and lime 4,343 ft.

BATSON—HARDIN COUNTY

Ada Belle Oil Co.'s No. 127 Producers ..... Tested dry 824 ft.; abandoned.
Ada Belle Oil Co.'s No. 128 Paraffine ..... Rig.
Capitol Oil Co.'s No. 11 Hodges ..... Pumped small amount oil and sanded 3,190 ft.
Gulf Production Co.'s No. 18 Knight fee (old well) .... Bailing 664 ft.
Paraffine Oil Co.'s No. 46 Paraffine ..... Standing 1,243 ft.
Paraffine Oil Co.'s No. 80 Paraffine ..... Pumped salt water 1,004 ft.

SOUR LAKE—HARDIN COUNTY

Humble Oil & Refg. Co.'s No. 2-C Jackson (old well).... Rigging up to pump 2,117 ft.
Lake View Oil Co.'s No. 60 Hardin ..... Comp. pumping 25 bbls. net oil 1,307 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 37-C ..... Drlg. sand and shale showing oil 817 ft.
Rio Bravo Oil Co.'s No. 78-C ..... Location.
Weldon Oil Co.'s No. 19 Hooks ..... Bailing 1,586 ft.

ORANGE—ORANGE COUNTY

Orange Pet. Co.'s No. 3 Berwick (old well) ..... Washing 3,293 ft.
Rex Petroleum Co.'s No. 2-B Carbello (old well) ..... Bailing 3,356 ft.
Supreme Oil Co.'s No. 3 Jackson (old well) ..... Drlg. 3,467 ft.
Tillery Oil Co.'s No. 2 State (workover) ..... Preparing to work over.

GOOSE CREEK—HARRIS COUNTY

Humble Oil & Ref. Co.'s No. 75 Simms-Smith ..... Drlg. sand rock 5,063 ft.
C. T. Rucker's No. 1 Jones ..... Shut down 832 ft.
Russell Farrell's No. 5 Gillette (old well) ..... Rigging up to pump 2,562 ft.
Lee & Scott's No. 1 Scott ..... Drlg. 1,212 ft.
W. C. Turnbow's No. 6 Scorrega (old well) ..... To pump 2,249 ft.

SPINDLETOP—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 8 Roche (workover) ..... Pumping 450 bbls. fluid, 70 per cent water 2,757 ft.
Gulf Production Co.'s No. 6 Oakwood, old well ..... Rig up to deepen.
Sun Oil Co.'s No. 11 McLean (workover) ..... Drilling.
Unity Oil Co.'s No. 15 Gladys ..... To pump.
Yount Lee Oil Co.'s No. 14 McFaddin (workover) ..... Drlg. 4,779 ft.
Yount Lee Oil Co.'s No. 54 McFaddin (old well) ..... Milling 3,078 ft.
Yount Lee Oil Co.'s No. 89 McFaddin (old well) ..... Drlg. shale and lime 4,531 ft.
Yount Lee Oil Co.'s No. 106 McFaddin ..... Comp. flowing 1,100 bbls. oil 3,954 ft.
Yount Lee Oil Co.'s No. 107 McFaddin ..... Drlg. shale and lime 3,550 ft.
Yount Lee Oil Co.'s No. 108 McFaddin ..... Drlg. gumbo 979 ft.
Yount Lee Oil Co.'s 109 McFaddin ..... Drlg. 1,001 ft.
Yount Lee Oil Co.'s No. 32 Gladys City (workover) ..... Comp. flowing 1,200 bbls. 1,267 ft.
Yount Lee Oil Co.'s No. 36 Gladys City (workover) ..... Drlg. sand 6,300 ft.
Yount Lee Oil Co.'s No. 43 Gladys City (workover) ..... Drlg. rock 4,356 ft.
Yount Lee Oil Co.'s No. 68 Gladys City (workover) ..... Rig up to deepen.
Yount Lee Oil Co.'s No. 93 Gladys City ..... Comp. flowing 240 bbls. oil 4,032 ft.
Yount Lee Oil Co.'s No. 94 Gladys City ..... Pulling screen to deepen 3,204 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Humble Oil & Refg. Co.'s No. 3 Smith ..... Rig.
The Texas Company's No. 24 Arnold ..... Rig.

HIGH ISLAND—GALVESTON COUNTY

Gulf Production Co.'s No. 9 Smith ..... Drlg. 3,073 ft.
Marrs McLean's No. 11 Cade (old well) ..... Swabbing to test 3,789 ft.
Marrs McLean's No. 15 Cade ..... Pulling strainer to deepen 3,741 ft.

DAMON MOUND—BRAZORIA COUNTY

Cullen & West's No. 1 Smith ..... Drlg. lime rock 3,059 ft.
Sinclair Oil & Gas Co.'s No. 6 Norton ..... No report; previous report heaving shale 4,168 ft.
Leonard Petroleum Co.'s No. 4 Wisdom ..... No report; previous report drlg. lime 3,989 ft.

MARKHAM—MATAGORDA COUNTY

Rycade Oil Corp.-Humble Oil & Ref. Co.'s No. 6-A Kountze ..... Drlg. sand showing oil 4,085 ft.
West Prod. Co.'s No. 1 Myers ..... Abandoned 4,788 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 19 Moore ..... Drlg. sandy shale 4,868 ft.

NORTH DAYTON—LIBERTY COUNTY

Duho Oil Co.'s No. 7 Quintette ..... Location.
Fort Bend Oil Co.'s No. 1 Ballarack ..... Drlg. 4,652 ft.
Harrison Oil Co.'s No. 4 Quintette ..... Drlg. 1,202 ft.
Sun Oil Co.'s No. 2 Kovelcik ..... Drlg. sand 5,267 ft.

REFUGIO—REFUGIO COUNTY

George Ball's No. 1 Terrell, workover ..... Drlg. 3,400 ft.
Coast Drilling Co.'s No. 1 City ..... Drlg. 405 ft.
Houston Gulf Gas Co.'s No. 9 Lambert ..... Drlg. hard sandy lime 3,088 ft.
Houston Gulf Gas Co.'s No. 6 Shelly ..... Coring sand 4,316 ft.
Houston Gulf Gas Co.'s No. 3 Rose Lambert ..... Drlg. rock 900 ft.
Houston Gulf Gas Co.'s No. 3 Adkins ..... Drlg. sand 3,782 ft.
Houston Gulf Gas Co.'s No. 2 Rooke ..... Cleaned hole 4,536 ft.; to deepen.
Houston Gulf Gas Co.'s No. 1 Buckley ..... Fishing drill pipe 3,129 ft.
Mission Drlg. Co.'s No. 1 Shelly ..... Cutting out casing 3,646 ft.
Mission Drilling Co.'s No. 1 Shay ..... Drlg. 562 ft.
Mission Drlg. Co.'s No. 1 O'Brien ..... Drlg. 3,890 ft.
Mission Drlg. Co.'s No. 2 Powers ..... Drlg. gumbo 1,300 ft.
Mission Drlg. Co.'s No. 1 J. F. B. Heard ..... Drlg. 4,288 ft.
Benedum & Trees' No. 4 Clint Heard ..... Putting on gas lift 3,695 ft.
Saxet Co.'s No. 5 Clint Heard ..... Fishing liner 5,044 ft.
Saxet Co.'s No. 8 Clint Heard ..... Fishing drill pipe; bottom in gas sand 3,656-59 ft.
Saxet Oil Co.'s No. 1 Fox ..... Cemented surface casing 496 ft.
Houston Oil Co.'s No. 6 Pratt-Hewitt-Rooke ..... Comp. flowing 100 bbls. pipe line oil; now flowing dry gas; sand 3,689-3,708 ft.
Houston Oil Co.'s No. 1 F. Rooke ..... Waiting cement to set 3,725 ft.
Houston Oil Co.'s No. 12 Rooke ..... Drlg. shale 1,902 ft.
Houston Oil Co.'s No. 6 Wilson Heard ..... Swabbed salt water 3,692 ft.; to sidetrack.
Houston Oil Co.'s No. 12 Fannie Heard ..... Waiting cement to set 3,656 ft.
Olgufer Oil Co.'s No. 2 Ryals ..... No report.
Blanco Creek Oil Co.'s No. 1 St. Johns ..... Fishing pipe.

SOUTH LOUISIANA FIELDS
LOCKPORT—CALCASIEU PARISH

Shell Petroleum Corp.'s No. 1 Miller ..... Drlg. sticky shale and sand streaks 6,513 ft.
Vacuum Oil Co.-Gulf Ref. Co.'s No. 9 Miller ..... Sidetracking in gumbo 3,924 ft.
Vacuum & Gulf's No. 15 Miller ..... Plugged from 5,827 ft. to 4,370 ft.; set screen.
Vacuum & Gulf's No. 3 State ..... Failed to pump; to work over. 4,400 ft.
Vacuum Oil Co.'s No. 7 Bordages ..... Rig.
Vacuum Oil Co.'s No. 3-A fee ..... Derrick.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 7 Dorion, East Hackberry ..... Location.
Calcasieu Oil Co.'s No. 2 Lemke, East Hackberry ..... Rig.
Calcasieu Oil Co.'s No. 15 Watkins, East Hackberry ..... Rig.
Fraim Oil Co.'s No. 1 Duhon, Old Hackberry ..... Standing 4,384 ft.
Rycade Oil Corp.-Humble Oil & Refg. Co.'s No. 3 Gulf Land, Old Hackberry ..... Drlg. rock 2,351 ft.
Sunshine Oil Co.'s No. 2 Ellender, Old Hackberry ..... Drlg. sand and gravel 751 ft.
The Texas Company's No. 5-B Calcasieu Lake, East Hackberry ..... Rig.

JENNINGS—ACADIA PARISH

Cline, Smith & Cline's No. 9 Conklin, Section 46-9s-2w ..... Tested salt water 1,979 ft.; abandoned.
Fred Getty's No. 3 Jennings-Clemont ..... Location.
E. L. Meyers' No. 1 Clemont-Zigler (old well) ..... To work over 1,805 ft.
Port City Oil Co.'s No. 11 Syndicate Fee, Section 46-9s-2w ..... Comp. pumping 70 bbls. net oil 1,864 ft.
Yount Lee Oil Co.'s No. 4 Crowley, northeast flank, Section 48-9s-2w ..... To set casing 7,800 ft.
Yount Lee Oil Co.'s No. 5 Crowley, Sec. 48-9s-2w ..... Location.
Yount Lee Oil Co.'s No. 7 Houssiene-Latrielle, Sec. 47-9s-2w ..... Location.

EDGERLY—CALCASIEU PARISH

C. M. Crotty's No. 15 Lillard ..... Rig.
Rex Petroleum Co.'s No. 10 Hunter ..... Drlg. 3,674 ft.

VINTON—CALCASIEU PARISH

Gulf Refining Co.'s No. 66 G. & N. Gray (old well) ..... Comp. flowing 150 bbls. net oil 3,017 ft.
Marrs McLean's No. 4 Gray (work-over) ..... Tested dry 1,787 ft.; shut down.
Salt Dome Oil Co.'s No. 2 Shaw ..... Drlg. 2,565 ft.
Vinton Petroleum Co.'s No. 14 Gray (work-over) ..... Drlg. 2,664 ft.
Vinton Petroleum Co.'s No. 9 Rescue (9 acres) ..... Drlg. 1,988 ft.

BAYOU BOUILLON—ST. MARTIN PARISH

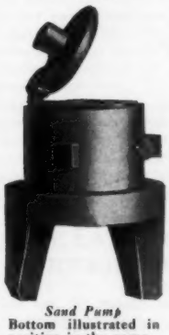
Rycade Oil Corp.'s No. 4 Bouillon fee (old well) ..... Comp. pumping 73 bbls. oil nine hours 3,360 ft.
Rycade Oil Corp.'s No. 7 Bouillon Fee ..... Reaming to set casing; total depth 3,941 ft.

MILLER COMBINATION BAILER & SAND PUMP—*Speed With Certainty*

Star Bottom used for cutting the sand loose and preferred by some to the Chisel Bottom.

Chisel Bottom will save the expense of running tools and its chisel shape prevents sticking in tightly packed sands.

Bailer Bottom will speed up production in cavy holes by time saved in picking up cuttings.



Sand Pump Bottom illustrated in position in the pump.

No matter how tough the job

Get—

A Miller Sand Pump

—it will do the work

faster—more economically

The Miller Combination Bailer and Sand Pump is built to stand the tough jobs, constructed of National Seamless Tubing and Sivyer Steel Castings, it is made throughout of steel and eliminates the use of leather washers.

As illustrated, the wire line has direct connection with Plunger, eliminating a rod, enabling use of a longer pump in the well. Plunger is made 18 inches long with eight water courses permitting the fluid to seal the valve on top of the plunger, thus creating a greater suction than in any other pump made. With both the latch and set screw used in the Miller Sand Pump it is impossible to lose a bottom.

Furnished with various type bottoms illustrated to meet any condition. Made in 2½, 3, 3½, 4, 4½, 5, 5½, 7, and 9 inch sizes, with any length up to 30 feet.

Send for circulars and price list. The Miller Sand Pump is sold through the leading supply stores or direct from the factory.

Patented
March 1, 1921—No. 1370340
January 20, 1925—No. 1523604

MILLER

Combination Bailer & Pump Co.

SAPULPA, OKLAHOMA

Rycade Oil Corp.'s No. 3 State (former well) ..... Fishing 3,357 ft.

SORRENTO—ASCENSION PARISH

Gulf Refining Co.'s No. 15 United, Sec. 22-10S-4e ..... Drlg. 1,849 ft.

STARKS—CALCASIEU PARISH

Gulf Refining Co.'s No. 15 Lutcher-Moore ..... Drlg. 6,050 ft.
Gulf Refining Co.'s No. 13 Industrial ..... Drlg. 6,500 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 736 Fee ..... Fishing drill pipe 6,064 ft.
Union Sulphur Co.'s No. 746 Fee, Sec. 29-9s-10w ..... Rig.
Union Sulphur Co.'s No. 747 Fee, Sec. 29-9s-10w ..... Drlg. 2,279 ft.
Union Sulphur Co.'s No. 748 fee, Section 29-9s-10w..... Drlg. 3,206 ft.
Union Sulphur Co.'s No. 749 fee, Sec. 29-9s-10w ..... Drlg. 2,000 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 7 Yount Lee ..... Drlg. sand 5,721 ft.
Pure Oil Co.'s No. 8 Yount Lee ..... Pulling screen to deepen.

ANSE LA BUTTE—ST. MARTIN PARISH

Yount Lee Oil Co.'s No. 5 Louisiana Pet. Co ..... Drlg. 3,625 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Whittington et al's No. 1 Lass, 4 miles northwest of Bellville ..... Drlg. 661 ft.

BRAZORIA COUNTY

Thomas Faust et al's No. 4 fee ..... No report.
Shell Petroleum Corp.'s No. 4 Allen, Allen dome ..... Waiting orders; total depth 5,184 ft.
Empire Gas & Fuel Co.'s No. 3 Brock, Stratton Ridge .. Drlg. hard lime 4,657 ft.
Humphreys Corp.'s No. 1 Bryan, Bryan Mound ..... Salt 3,685-3,710 ft.; abandoned.

CHAMBERS COUNTY

Layne et al's No. 1 Fitzgerald ..... Drlg. 1,852 ft.
Pure Oil Co.'s No. 2 Mayes, Lost Lake ..... Drlg. shale 2,499 ft.
Pure Oil Co.'s No. 3 Mayes, Lost Lake ..... Sand showing oil 2,121-39 ft.

FORT BEND COUNTY

Gulf Production Co.'s No. 12 Trone, Long Point ..... Drlg. gumbo 1,925 ft.
Grayburg Oil Co.'s No. 1 Ranson ..... Drlg. sand rock 630 ft.
Humble Oil & Refg. Co.'s No. 1 Miller, Rosenberg ..... Drlg. shale and lime 4,445 ft.

HARRIS COUNTY

Baldwin and associates' No. 1 Kitzman, Cypress ..... Set 5 3/16-in. casing 3,950 ft.; bottom shale and lime 4,014 ft.
Humble Oil & Refg. Co.'s No. 2 Irvin ..... Drlg. shale and lime 2,861 ft.
Humble Oil & Refg. Co.'s No. 5 Warren, Hockley ..... Abandoned 4,983 ft.
Humble Oil & Refg. Co.'s No. 1 Woodburn, Genoa ..... Drilled out 9⅝-in. plug 3,616 ft.
Little York Oil Co.'s No. 1 Davis, Little York ..... Shale 4,018 ft.; shut down.
York & Robertson's No. 1 Garrett, Harris & Carpenter survey ..... Location.

JEFFERSON COUNTY

Bleakie Oil Co.'s No. 1 Tolliver, Dyches survey ..... Drlg. gumbo 2,800 ft.
Deep Test Oil Corp.'s No. 1 Faith-McFadden ..... No report.
Gulf Production Co.'s No. 3 Burrell Fannette ..... Derrick.
Gulf Production Co.'s No. 7 Bordages, Fannette (workover) ..... Pulling screen to deepen 5,660 ft.
Gulf Production Co.'s No. 11 Thomas, Fannette (workover) ..... Pulling screen to deepen 5,665 ft.
Nederland Oil & Dev. Co.'s No. 1 Young, Nederland ..... Shut down 2,520 ft.
River Oil Corp.'s No. 1 Ship Channel, Brown survey ..... Shut down; gumbo 1,721 ft.
Shell Petroleum Corp.'s No. 1 Heisig, Hampshire ..... Drlg. shale 5,691 ft.
The Texas Company's No. 2 Pipkin, Big Hill ..... Rigging up.
Vacuum Oil Co.'s No. 1 Herbert-Broussard, T. & N. O. survey No. 208 ..... Rigging up.
Westbury Oil Co.'s No. 1 West ..... Drlg. gumbo 1,300 ft.

LIBERTY COUNTY

Gulf Production Co.'s No. 2 Bert Hankamer ..... Drlg. 1,243 ft.
Humble Oil & Refg. Co.'s No. 5 Sterling, Moss Bluff .... Drlg. hard sand 4,082 ft.
Harvey Smith and asociates' No. 1 Moore's Bluff, Brunson Sur. ..... Rigging.
Pure Oil Co.'s No. 1 Liberty, Moss Bluff ..... Drlg. gumbo 1,542 ft.
Republic Production Co.'s No. 1 Myslivec, Moore survey .. Drlg. 4,604 ft.

MATAGORDA COUNTY

Crossland and associates' No. 1 Hawkins, Shepherds Mott. No report.

MONTGOMERY COUNTY

Cullen and associates' No. 1 Chase, near Hufsmith ..... Drlg. gumbo 2,668 ft.
Kelley-Baker et al's No. 1 Juerges ..... Location.

ORANGE COUNTY

The Texas Company's No. 1 Polk, Port Neches ..... Building foundations.
The Texas Company's No. 1 Starks, Port Neches ..... Derrick.
Veteran Oil Co.'s No. 1 Reed, A. Nelson survey ..... Drlg. 4,500 ft.

WALLER COUNTY

Kirby Petroleum Co.'s No. 1 Vaughn, San Felipe ..... Drlg. 1,802 ft.

SOUTH LOUISIANA

ASCENSION PARISH

Pickard & Geisman's No. 1 Desire Breaux, Darrow ..... Drlg. 3,143 ft.
Big Dome Dlg. & Dev. Co.'s No. 1 Reardom, Darrow .... Drlg. 4,800 ft.
Triumph Oil Corp.'s No. 2 Lacey, Sec. 29-10s-4e ..... Standing 2,697 ft.

CALCASIEU PARISH

Wilfred LaHay's No. 2 James, Section 14-10s-13w ..... Shut down 3,365 ft.
J. O. Davis' No. 1 Mims, Section 20-9s-7w ..... No report.

CAMERON PARISH

Shell Petroleum Corp.'s No. 11 Watkins, Black Bayou .. Tested salt water 992 ft.; to deepen.
Shell Pet. Corp.'s No. 12 Watkins, Black Bayou ..... Rigging up.
Shell Pet. Corp.'s No. 13 Watkins, Black Bayou ..... Location.
Shell Pet. Corp.'s No. 1 Marceaux, Mallard Bay, Section 32-12s-3w ..... Dredging canal.
The Texas Company's No. 4-A Calcasieu Lake, Calcasieu Lake Dome ..... Location.

EVANGELINE PARISH

The Texas Company's No. 1 Guillory, Pine Prairie ..... No report.

IBERIA PARISH

The Texas Company's No. 4-A Vermillion Bay ..... Location.

IBERVILLE PARISH

Gulf Refg. Co.'s No. 10-Z State, Loreauville ..... Rigging.
Shell Petroleum Corp.'s No. 3 Wilbert, White Castle .... Sticky shale and sand 5,626 ft.; cem. 6⅝-in. casing 5,612 ft.
Standard Oil Co.'s No. 3 Wilbert, Bayou Blue ..... Spudded.
Standard Oil Co.'s No. 2 Schwing, Bayou Blue ..... Drlg. 400 ft.
Standard Oil Co.'s No. 3 Schwing, Bayou Blue ..... Location.
Standard Oil Co.'s No. 4 Schwing, Bayou Blue ..... Location.
Standard Oil Co.'s No. 5 Schwing, Bayou Blue ..... Derrick.

JEFFERSON DAVIS PARISH

Vacuum Oil Co.'s No. 2 DeVilbiss, Roanoke ..... Rigging up.

PLAQUEMINE PARISH

The Texas Company's No. 2 Garden Island Bay, Sec. 107-23s-32e ..... Rigging up.
Humble Oil & Refg. Co.'s No. 1 State, Sec. 2-20s-26e..... Rig.
Humble Oil & Refining Co.'s No. 1 Lake Washington, Township 20s-26e ..... Location.

ST. BERNARD PARISH

St. Bernard Oil & Gas Co.'s No. 1 fee, Sec. 15-14s-15e.... Shut down 726 ft.

ST. JAMES PARISH

Convent Oil Co.'s No. 2 Reynaud, Sec. 1-12s-4e ..... Location.

ST. LANDRY PARISH

Gulf Refining Co.'s No. 1 Gaudet, Point Barre ..... Coring 3,978 ft.
The Texas Company's No. 2 Botney Bay, Point Barre ... To deepen.

ST. MARTIN PARISH

Ohio Oil Co.'s No. 3 Martin, Hager dome ..... Standing 4,490 ft.
The Texas Company's No. 1 Fee, Hager Dome ..... Shut down; high water 1,233 ft.
The Texas Company's No. 2 St. Martin, Hager ..... Rig standing; high water.

ST. TAMMANY PARISH

St. Tammany Oil Co.'s No. 2 Fritchie, Sec. 25-8s-14e .... No report.

TANGIPAHOA PARISH

Completion Oil Co.'s No. 1 Amos ..... No report.
Joan Development Co.'s No. 1 Hilton, Sec. 20-9s-9e ..... Sand 3,998 ft.; shut down.

TERREBONNE PARISH

Southern Gas Co.'s No. 1 Waterproof, Houma ..... No report.
The Texas Company's No. 1 L. L. & E., Four Isle Bayou .. Drlg. gyp 1,065 ft.
The Texas Company's No. 1-A Timballer Bay, Section 19-23s-20e ..... To make drill stem test oil sand 1,762 ft.
The Texas Company's No. 2-A Dog Lake Bayou, 400 ft. south of No. 1 ..... Location.
The Texas Company's No. 1-B Dog Lake, Sec. 6-22s-16e .. Location.
The Texas Company's No. 1-B Lake Pelto, Section 8-23s-18e ..... Deepened from 1,268 ft. to 1,383 ft.; bailing.
The Texas Company's No. 1 Taylor, East Bay Junop Dome ..... Rig.
The Texas Company's No. 2-A Lake Barre, Section 30-21s-20e ..... Tested salt water.
The Texas Company's No. 2B Bay Coon Road, Sec. 17-22s-18e ..... Location.
The Texas Company's No. 3-B Bay Coon Road, Sec. 17-22s-18e ..... Location.

EAST CENTRAL TEXAS DRILLING DEVELOPMENT

By Neil Williams

CORSICANA, Tex., July 15.—Humble Oil & Refining Co. late in the week had set strainer to test oil sand in its No. 3 Holloway on the southeast flank of Boggy Creek, Anderson County, but outside of this and another bit of bad luck in C. F. Lytle's No. 1 Thompson, Mexia Trinity sand test, operations in East Central Texas continued routine.

Magnolia Petroleum Co., which several weeks ago took over holdings on the northeast flank of the Boggy Creek Dome, is expected to start operations soon. The entire dome previously has been held by the Humble Oil & Refining Co. and Rio Bravo Oil Co. jointly.

Humble Oil & Refining Co.'s No. 1 Beard, on the south side of the dome is drilling chalk at 3,534 feet. A derrick is up for No. 4 Holloway and one is being built for No. 2 Neches River. Humble's No. 3-A Elliott & Clark (Cherokee County) is drilling sand and shale at 1,644 feet, and No. 3-A Todd is drilling rock at 1,781 feet.

Humble Oil & Refining Co.'s No. 3-A Southern Pine, on the Posey Saline, 8 miles south of Boggy Creek, in Anderson County, is drilling sand at 4,324 feet. Pure Oil Co.'s No. 1 Jackson, Bethel Dome, same county, is drilling in shale at 4,408 feet.

C. F. Lytle's No. 1 Thompson, Trinity sand test at Mexia, Limestone County, was swabbed dry at 6,068 feet and after going 27 feet deeper drill stem stuck. This was the eighth time this test was tested. Fentress and associates' No. 1 Sullivan, Limestone County, is drilling shale at 3,196 feet.

Magnolia Petroleum Co.'s No. 1 Duran, Lollar Survey, Rusk County, is drilling shale at 2,608 feet. C. M. Joiner's No. 2 Bradford, same county, has been shut down in sandy shale at 1,130 feet. Amerada Petroleum Corp.'s No. 1 Wade, Fields Survey, Upshur County, is setting 8¼-inch casing at 4,862 feet. Hudspeth and associates' No. 1 Wilborn, same county, is drilling shale at 2,818 feet.

In Robertson County, W. D. Alexander aud associates' No. 1 Anderson, Webb Survey, has been shut down in shale at 2,691 feet. Killiam & Phillips' No. 2 Jones, Falls County, is drilling shale at 1,316 feet. These operators' No. 3 Bryant, Naber Survey, McLennan County, is drilling red beds at 1,320 feet.

Riverland Oil Co. and Tidal Oil Co.'s No. 2 Finch, a quarter mile north of the Powell Field, Navarro County, has started drilling following the abandonment several weeks ago of No. 1, which was 1,800 feet southwest of No. 2.

In Hill County, Harper and associates are rigging up for No. 2 Jones, D.B.&C. Survey. This is on the same tract on which the same operators' discovery well was completed as a small pumper several weeks ago.

Daily average production for the division for the week ending July 13, was:

East Central Texas Production

Boggy Creek	2,906
Cedar Creek	100
Currie	434
Hill County	75
Mexia	5,415
Minerva	650
Nigger Creek	320
Powell	7,983
Richland	380
Thrall	32
Wortham	1,215
Total	19,510
Week ending July 6	19,142
Increase	368

MUSKEGON FIELDS

(Continued from Page 62)

Oil Co.'s No. 3 Joslin, SE SW, Section 12-14-3, Chippewa Township, Isabella County, at 3,564 feet is estimated at 1,000 bbls. initial. The Pure company's No. 1 Roebuck, NE NW, Section 13-14-3, Chippewa Township, Isabella County, was estimated as 400 bbls. initial in the Dundee. It is a south offset to the No. 1 Joslin.

About 30 other wells are drilling in the Mount Pleasant Field.

Showing in Montcalm County

Hale, Hickey and Snyder's No. 1 Snyder, NE SW, Section 20-12-8w, Cato Township, Montcalm County, had a good show of oil and gas in the Dundee formation at 3,525 feet but at 3,600 feet had not yet come in as a producer. Reports had it that the well would make 50 bbls. a day although it did not have gas enough to flow.

Blair and Miller's No. 1 F. Knowlton, SW SW, Section 2-6s-16w, Milton Township, Cass County, had the bottom water in the Dundee at about 1,250 feet.

C. F. Kimmell and G. H. Schrack's No. 1 F. L. Hamilton, NE SW, Section 5-1n-14w, Chester Township, Allegany County, was reported to have a show of oil last week but had nothing according to operators at 1,400 feet.

The Wright Oil Co.'s No. 1 Joseph Kluting, being drilled by Kelly Goldboss near Conklin and west of Grand Rapids, was back in salt saturated with oil again after having had about 59 feet of black lime. Drillers were going on in hopes of striking a porous limestone in which commercial production might be developed.

Kent County Wildcats

Two wildcats in Kent County are drilling at 1,800 and 2,120 feet respectively, while a third is just getting under way.

Muskegon County Wildcats

The Fruitport wildcat was 64 feet in the Dundee limestone with no signs of enough porosity or oil or gas to make it a commercial producer in that formation. It was drilling at 2,138 feet after topping the Dundee at 2,074 feet. Great interest has been exhibited in this well because of the large tracts of acreage held in the vicinity of Fruitport by a number of large operating companies whose geologists have had faith in the area.

Oceana County

The Sankey Oil & Gas Co.'s No. 1 Frank Darlington, SW SE, Section 9-14-15, Newfield Township, Oceana County, was drilling at 2,400 feet and dry in the upper Traverse, which was topped at 2,200 feet.

Newaygo County

Three new wells are being started in Newaygo County. One is being rigged up on the property of Senator Orville E. Atwood, NW SE, Section 31-12-13, Garfield Township. The Pennsylvania Oil & Gas Co. is rigging up in Section 32-15-14, Goodwill Township, and so is Rigler-Wood's No. 1 in Section 19-15-13, Lilley Township.

The Universal Oil Co. of Detroit has taken over 32,000 acres of oil leases in Newaygo County and will carry out the program for drilling eight wells which had been planned by the Premier Oil & Gas Co.

NATURAL GAS NEAR MEXICO CITY

A concession has been granted for the exploration and exploitation of a natural gas belt discovered in the valley of Mexico, not far from Mexico City. It is planned to form a company with capital to supply natural gas to Mexico City and its suburbs.

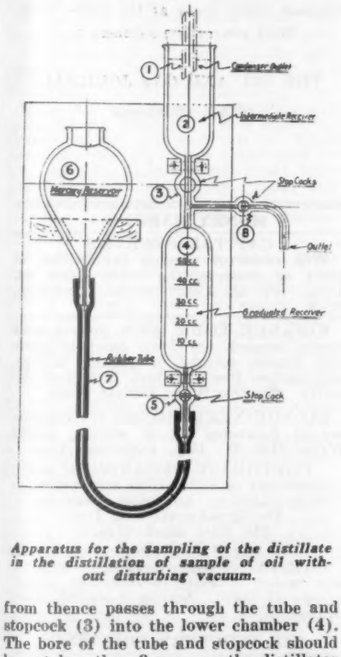
Practical Suggestions in Refining

By W. T. Ziegenhain

Apparatus Permits Sampling Oil During Vacuum Distillation

A simple and very practical apparatus and method has been worked out by A. A. Ashworth for the sampling of the distillate in the course of a vacuum distillation, without disturbing the continuity of the operation and without placing any additional load on the pump. In most cases, it is necessary to use at least two receiving flasks, one of which collects the distillate while the other is removed with the sample. This method required the evacuation of the new flask every time a sample is taken and in turn, places an additional load on the vacuum pump. At the same time, there is a break in the pressure maintained on the system which disturbs the continuity of the distillation and may cause a sufficient error to render the distillation results unreliable. The "Journal of the Institution of Petroleum Technologists" outlines the method and referring to the accompanying drawing the procedure may be followed.

On the diagragm (1) is the outlet of the condenser in which the distillate is condensed. This distillate drops into the upper chamber of the apparatus (2), and



Apparatus for the sampling of the distillate in the distillation of sample of oil without disturbing vacuum.

from thence passes through the tube and stopcock (3) into the lower chamber (4). The bore of the tube and stopcock should be not less than 3 mm., as the distillates may be of a very viscous nature, and it is essential that they should flow from (2) to (4) sufficiently fast to keep (2) free from distillate when stopcock (3) is open. Chamber (4) is graduated to show the volume of the fraction collected. When sufficient of the distillate has been received, stopcock (3) is closed, and during the withdrawal of the fraction the distillate is allowed to collect in chamber (2).

The bottom of the chamber (4) is furnished with a tube and stopcock (5) by which it is connected to a mercury reservoir (6) by the heavy rubber tubing (7). By opening stopcock (5) the mercury displaces the distillate in chamber (4) and forces it through the delivery tube and stopcock (8) into the usual graduated cylinder. When the mercury has risen to the level of the delivery tube (8), stopcock (5) is closed and the mercury in chamber (4) is lowered below stopcock (5) which is then closed. Chamber (4) is then under full vacuum and, on opening stopcock (3) the distillate which has meanwhile collected in chamber (2) flows into chamber (4) to form part of the next fraction.

For the distillation of lubricating oils Mr. Ashworth suggests the use of a 1,500 cc. flask charged with 1,000 cc. of the stock. Fractions of 50 cc. are taken and this amount is sufficient to permit the various tests to be made on each fraction.

Action of Gum in Gasoline on Motor Operation Discussed

Some interesting facts relating to the action of gum in gasolines was brought out at the recent meeting of the Society of Automotive Engineers. In a paper prepared by V. Voorhees and J. O. Eisinger of the Standard Oil Co. of Indiana the conclusion was drawn that the gum content formed in the engine was dependent only upon the content at the time the gasoline enters the fuel-induction system and does not bear any relation to oxidation or polymerization during vaporization. J. B. Hill, of the Atlantic Refining Co., in discussing the paper added:

"We are still somewhat surprised by the considerable quantities of gum these investigators have obtained in this work in the engine test. We have been making engine tests recently with gasoline having about 30 mg. of gum content per 100 cc. on the steam-oven test, which is above Mr. Eisinger's limit. We have been using it in a four-cylinder engine, about 3¼ by 4½, L-head construction. We determined to run the engine on this gasoline until we got into serious trouble. The sample of gasoline we had available amounted to 700 gallons, all of which was used without getting into any trouble. When the engine was taken apart and carefully examined, the manifold and inlet valves showed no deposit at all."

F. C. Wittington, of the Stewart-Warner Speedometer Co., then commented as follows:

"Mr. Eisinger spoke primarily of the condition of heat in connection with gum deposit. The first indication we ever had of gum deposit was in locations where there was no heat. I wonder if this deposit is increased where heat is present or if the percentage of deposit would be the same whether or not heat was present. Our attention was first drawn to the subject by a complaint about six months ago regarding sticky flapper valves in vacuum tanks; and upon checking several of these tanks and making an examination, we found a fine deposit on the flapper valves. Enough could not be collected, however, to make an analysis. I should like to know the precise relationship of the gum deposit to the very high heat condition in most of the tests dealt with by the authors of the paper. I should also like to ask about the increase of gum content with the storage of gasoline. Are we to understand that the gum content continues to increase during storage? If so, what chemical action occurs or what manufactures that gum during storage?"

These questions were answered by Mr. Eisinger who said:

"One of the tests reported was made at a somewhat lower manifold-wall temperature. At the higher temperatures the deposit was harder and more deposit formed than at the lower temperature, which shows that temperature is a factor. Gum deposition in the carbureter and other relatively cool parts will be less than in the intake system, when using a gum-forming gasoline. Different gasolines form gum at different rates, depending upon how they are made. Most of them have a very decided induction period, as we call it, during which the oxidation of the gasoline, and the consequent gum formation, is very low. After the induction period, which may be from one to six months or more, depending upon the gasoline and the storage conditions, the rate of gum formation is relatively high."

The discussion which followed dealt with the possibility of gum causing excess carbon formation in the cylinders of the motor. It was suggested that as higher compression engines are placed on the market and greater percentages of the high antiknock gasolines are used which in turn seem to have a higher gum content as a class, that carbon forming troubles will also be increased despite the efforts being made to improve the quality of the lubricating oils. This thought was given little encouragement by Mr. Hill who said:

"We have been getting along in the past with virtually no gum trouble from gasoline. It is a subject which has just begun to open up with some of the very high antiknock vapor phase cracked gasoline. Our evidence all seems to show that any gum trouble that happens occurs in the fuel-induction system up to and including the inlet valve. Whatever gum is present apparently has done its damage by the time it reaches the cylinders, and we believe there is very little possibility of any of it getting beyond the inlet valves. I think the exhaust valve and piston troubles undoubtedly are caused by lubricating oils."

REFINERY EMPLOYMENT CONTINUES INCREASE

A further increase is shown in the number of men and in the amount of the pay roll in the refineries of the United States for May compared with April, according to the report of Department of Labor. In May there was an increase of 2.1 per cent in the number of men and an increase of 1.4 per cent in the amount of the pay roll compared with the previous month. On the same basis, the May figures for this year exceeded those of a year ago by substantial margins. The number of men is shown as 15.2 per cent higher and the amount of the pay roll as 16.9 per cent higher.

There has been a constant increase in both cases throughout the year to date and the conditions are very nearly equal to those of 1926. This is considered remarkable in as much as the adoption of automatic control in refineries has replaced many men. Undoubtedly, the improvement thus far this year has been the result of the great amount of construction work started late last year. Much of this is completed now and subsequent reports may show a gradual decrease over the balance of the year.

METAL LATH FOR LOW PRICED SAFETY GUARD

The use of metal lath as a material for making safety guards around machinery and hot pipes is finding favor among refiners as the cost in installation is low and the material is entirely satisfactory for both temporary and permanent installations. This lath is intended for use in building construction and is available in three grades. These are made from three different thicknesses of sheet steel.

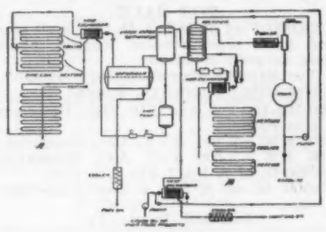
In each case the steel is punctured and pulled in such a manner to form a network, leaving ample free space for the passage of light and air. The heavier grade is generally used for safety work and is sufficiently rigid to be safely used in most cases. This type of material is finding favor since it may be purchased at a low cost, may be cut and trimmed with ordinary heavy hand shears, is rigid even in panels 4 feet square and may be easily reinforced with bar iron or strap iron where needed.

Recent Patents

CRACK AND RECTIFY

1,701,477. Treatment of Mineral Oils by Heat. Walter James Perelis, Everett, Mass., assignor to Shell Development Co., San Francisco, Calif., a corporation of Delaware. Filed June 24, 1925. Serial No. 39,280. 29 Claims. (Cl. 196—48.)

Process for the conversion by heat of a heavy heterogeneous mineral oil feed stock into gasoline and higher boiling point products comprising separating the more volatile from the less volatile con-



stituents of the feed stock, subjecting said less volatile constituents to a cracking reaction and separating a heavier fraction of the more volatile products of said cracking, mixing said heavier fraction with a heavier fraction of the more volatile constituents of the feed stock, separately cracking said mixture concomitantly with but under different conditions than said first named cracking reaction, and collecting the products of said cracking reactions which have a boiling point within the gasoline range.

In a process for rectifying the volatile derivatives from the heat treatment of a mineral oil, that step comprising heating the materials for rectification by continuously subjecting the condensate in the bottom of a suitable rectifying column to flow maintained in a tubular heater under pressure at a cracking temperature, reducing the temperature by heat exchange with the said bottom condensate of the rectifying column and then reducing the pressure, and returning the efflux to the bottom part of the rectifying column at a temperature above the vaporization endpoint of the desired rectified condensate.

VENTURI TUBE USED TO MAINTAIN BACK PRESSURE

1,707,606. Methods of and Means for Treating Fluid Hydrocarbons. Frank B. Fretter, Cleveland, Ohio, assignor to The National Refining Co., Cleveland, Ohio, a corporation of Ohio. Filed June 18, 1925. Serial No. 37,941. Eight claims. (Cl. 196—58.)

1. The herein described method of treating fluid hydrocarbons, which consists of rapidly impelling the treated hydrocarbon through a heater under extraneous pressure approximately 1,000 pounds per square inch and obtaining a working temperature for said hydrocarbons in excess of 800 degrees Fahrenheit, permitting the escape from the heater of graduated volumes of the hydrocarbon through an accelerating vent having the characteristics of the Venturi tube into a vaporizing chamber at approximately atmospheric pressure, and separating the heavier and lighter hydrocarbons resulting from this treatment, substantially as set forth.

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J. E. Galligan, Box 2087, Tulsa, Okla.

FOR SALE—EQUIPMENT

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FOR SALE complete set Standard Tools. 12x12 AJAX engine (NEW). 2,000 ft., 6⅝-inch, 24-pound. 700 ft. 10-inch, 52-pound. 1,500 ft., 2-inch pipe. F. E. Turner, 217½ Broadway, Muskogee, Okla.

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NEED $8,000 to drill block in West Texas. Shallow production there now. Best geology surface and subsurface by successful men. Box D-2, The Oil and Gas Journal, Tulsa, Okla.

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WANTED—Two designing draftsmen with general oil refinery experience in piping concrete and structural steel. Give detailed experience in writing with date you can report. Shell Petroleum Corporation, Sellers, Louisiana.

DRAFTSMEN wanted with piping experience in oil refinery or similar industry. In replying give full details of personal history, experience, salary desired, also small photograph. Box D-11, The Oil and Gas Journal, Tulsa, Okla.

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Chemists or chemical engineers; must be thoroughly experienced in one or more of the following:
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In reply give detailed information regarding personal history, education and experience. Send kodak picture of yourself. Give references; state salary expected and date available. Applications will be held confidential. Address Box 788, Wood River, Ill.

WANTED a young man familiar with oil well supplies and oil field equipment for estimating department. Must have some technical education. Give age, education and experience. Address Box D-20, The Oil and Gas Journal, Tulsa, Okla.

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WANTED—Position with some large oil or manufacturing company as manager of purchases and stores. Twenty years' experience in handling purchases and stores for one of largest independent corporations in South. If interested, full particulars and references will be exchanged. Address Box D-23, The Oil and Gas Journal, Tulsa, Okla.

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7,000 ACRES for lease in Washington County. Lease located 3 miles South Sun Oil Field. About 18 miles Northwest of Bellville Oil Field. About 10 miles West of Wesley Oil Field, between 3 big oil fields. This almost proven oil territory. Many derricks up and drilling all over the county. A wonderful opportunity. M. E. Fisher, Brenham, Texas.

FOR SALE—80 acres, Cotton Co., making 16 barrels settled; also Chevrolet car, Ford tractor with winch, superior gas engine, casing, tubing and other material. Box C-993, The Oil and Gas Journal. Tulsa, Okla.

FOR LEASE, Lea County, New Mexico, 3,000 acres close to production. Attractive proposition for responsible man who can drill at once. Phone 3-4229, 405 Burk Burnett Bldg., Fort Worth, Texas.

OIL LEASES and Royalties for sale. Oklahoma and Texas. O. O. Milliken, Box 63, Oklahoma City, Okla.

REAGAN CO. Deepest producing well in the World, 8,523 ft., 5 acre leases for $100.00 amidst California Oil Co. Block just assembled. My leases surrounded by Sun, Magnolia, Gulf, Humble, Shell, Marland, Skelly, Empire, Pure, Texas and the Associated Oil Co. Buy before prices advance. Paige Smith, Box 94, Nicoma Park, Okla.

WASHINGTON County, Tex., about three miles west of Yegua field, on local structure, good geology surrounded by drilling. Twenty, forty, or eighty acre leases, twenty dollars per acre. Courtesy to brokers. Box 183, San Antonio, Texas.

5,000 acres in leases given free for the drilling of a well to 3,500 feet; Eastern Kansas; good geology. H. W. Mitchell, Parker, Kansas.

FOR SALE—Lea County, New Mexico, Oil and Gas leases. Five year, low rental. Small investment. Terms. Monarch Inv. Co., Roswell, N. M.

LANDS, Leases, Royalties and drilling blocks in proven or unproven territories, Winkler, Pecos, Ward, Loving, Reeves, Culberson and adjoining Counties. Wire or write.
H. F. Anthony, Anthony Bldg.,
Pecos, Texas.

30,000 ACRE lease in Harding Co., New Mex. Will sell or make drilling contract. Have Geologist's report. Plenty of structure in sight. Also for sale or lease. 160 acres Grey Co., Texas. 1½ miles from big wells at LaFores. W. H. Woodlief, 728 N. Fillmore St., Amarillo, Texas.

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250 bbls. daily production, 16 wells, 3 wells now drilling on production; also 4 wildcats commencing to drill this month. Have 120 leases of different sizes and interest, nearly all on subsurface geology. Wonderful foundation or nucleus for a company in Wichita Falls district. This is most unusual opportunity by reason of owner's desire to rest and travel. Wire for particulars or come and inspect. H. B. Dudley, 704 Hamilton Bldg., Wichita Falls, Tex.

FOR SALE

Selected lease and one-half royalty on good structure in Oklahoma. W. M. Worthen & Co., 305 Okla. Sav. & Loan Bldg., Telephone 2-3666, Oklahoma City, Okla.

IF INTERESTED in the Michigan Oil Fields, write for free bulletin, or other information. Michigan Oil & Mining News, 115 Ionia St., Grand Rapids, Mich.

LEASES—PRODUCTION

WANT TO SELL one-half interest in five blocks of acreage in Wichita Falls district with a well completed on each block. Good subsurface geology for total consideration $25,000.00.
H. B. DUDLEY
704 Hamilton Building
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Easy Tone in Chicago Gasoline Market

Jobbers Reducing Their Stocks in Anticipation of Tank Wagon Change. Kerosene Dull; Gas and Fuel Oil Quiet

By J. B. Waldo

CHICAGO, July 15. — The gasoline market opened the week with light buying and an easy tone, a condition that might naturally follow the declines made in prices last week. Jobbers are not only aware of the conditions in the spot market but they anticipate a change in the tank wagon scale and are reducing their stocks to the smallest quantity on which they can operate. Major refiners continued to quote 8½ cents as their spot price for prompt shipment but were not doing any amount of spot business. U. S. Motor gasoline was commonly quoted by others than the major refiners at 8 to 8¼ cents and it seemed that only a small part of the going business was done at more than 8 cents. When a buyer wanted gasoline he was generally willing to pay 8 cents but it was hard to sell at a higher price. Many of the quotations made at this range were for delivery over the remainder of the month. There was only an insignificant inquiry for the higher gravities in gasoline.

Kerosene was dull but the price was holding at 5½ cents in the open market with some asking a quarter of a cent higher. The furnace oil demand was light but price for distillate and zero gas oil showed no change Monday.

Gas oil and fuel oil were quiet from inquiries Monday morning and buyers generally holding off. Bright stocks were very strong and some refinery buying of Mid-Continent bright stocks was reported at 36 cents, some of the orders being for a considerable quantity. One sale of 130 cars at that price was reported.

The few reports at hand on Monday indicated a good gallonage over the week-end. The weather is very favorable and the prediction for the week is clear and warmer.

No Improvement in Spot Sales

Since the reduction in the price of U. S. Motor gasoline on Monday of last week there has been no real improvement in the spot sales of gasoline. This was a result that was to have been anticipated for the old rule is "not to buy on a falling market." But many here had hoped that with the lower price there would be more jobbers who would be willing to place orders. The best efforts to sell resulted only in disappointment for the jobbers seem more than ever determined to restrict their purchases to immdiate wants and to reduce their stocks to the lowest possible quantity. Many have so stated when asked for orders or their opinion of the market. In some cases they have, while refusing to purchase now, suggested that the would-be seller call them again "when your price gets down to 7½ cents." These are the larger dealers with considerable storage. The smaller jobbers with little tankage are, of course, buying from time to time as they run short but are taking some chances and waiting until the last moment and then asking for rush shipments or for cars in transit. There are rather few of the latter as the practice of ordering out cars from the refinery to meet the demand from these late buyers has not been profitable during the past few weeks.

The major refiners who have a list of contract customers claim the lower market price has improved the ordering against contracts but jobbers are quite generally not giving full instructions for the month or ordering more than their minimum quantities under the contracts and some sales managers admit they find it difficult to secure even these instructions for the limited quantity. Others claim orders are coming in in very fair shape. Some salesmen closely in touch with their trade have stated their customers had cause for complaint when they were obliged to pay 9 cents or better Group 3 under a contract while their competitors who were buying in the spot market had no difficulty during the week before the price change in securing competing gasoline at a price range of 8 to 8¼ cents. Although there was a profit at the current public prices to buyers who operated on contracts, the greater profit made by those who bought in the spot market enabled these to do things for their customers the contract dealer could not do. The spot buyer may not have cut the open price or given secret rebates, but he could provide a service the dealer operating on the smaller margin could not afford. Under the market conditions the jobbers claimed they must have a lower cost and when they did not get it from their contract refiner, they bought just as much gasoline as they could where they could get it the cheapest.

New Sources

The condition which confronts the refiner comes from the free offerings of gasoline from sources that have not usually had gasoline to sell in parts of the country where it is directly in competition with the refiners of the Mid-Continent Field. The California material is being shipped freely to the North Atlantic ports where it displaces the products of the refiners who would otherwise supply that section. Incidentally the California gasoline is well liked along the Atlantic Coast for its high antiknock qualities. Refiners in Western Pennsylvania, in West Virginia as well as Ohio, have been flooding Ohio and some parts of Michigan and Indiana with gasoline which they sell at prices which range from 7.05 cents to 7.30 cents, Group 3 basis. And what is most important, is that the group of refineries at East Chicago, at Wood River, at East St. Louis have greatly increased their refining capacity and are running practically at their capacity. All these refiners have advantages in freights over the Mid-Continent refiner. Their crude costs are but little higher owing to pipe line transportation. The sales manager of a Mid-Continent organization commenting on the reduction made by the Atlantic Refining Co. to 11 cents delivered in any part of Ohio, said he did not see how they could afford to make such a price when running on $4 crude. He had overlooked the fact which he knew when reminded of it that the refineries of the Atlantic company at Franklin and Pittsburgh are supplied by pipe line from the Atlantic Coast and are commonly understood to be charging chiefly Venezuelan crude. These refinery activities in these sections which up to a few years ago could not supply the local needs but which today have gasoline for which they must find a market at some distance from the refinery has had a great deal to do with the present gasoline market.

The condition is not due to lack of a reasonable increase in the consumption. Each year for the past 15 years or so, there has been an increase in the domestic consumption over that of the preceding year. The season of 1929 is no exception and while the percentage of increase may be smaller, the volume of increase is larger each year. The exports have totaled larger this year to date than last, the whole trouble has been the excessive supply due largely to the failure of the refiners in each section to realize that while they were increasing their capacity other sections were doing the same and new refining centers were also being developed.

Keener Competition

Buyers have been made wise to this fact by the offering of gasoline from these various refining centers as they developed to the point where they had material in excess of their local needs. Such organizations as the three great refineries just south of this city do not hold back when it comes to disposing of their product whether it be in tank car lots to a jobber or through contracts which give some distributor an exclusive franchise. Some West Texas refiners have offices in this city or salesmen traveling the territory and very jobber located so he can use their gasoline knows about these sources. It is a case of increased competition between refining centers and to sell the distributors in almost any territory and particularly in that of the Standard Oil Co. of Indiana, the refiner in one center must compete in quality, in price and in service with the refiners of other refining centers.

Range of Quotations

The market last week showed a somewhat narrower range of quotations. U. S. Motor gasoline was quoted at the close of last week in a range of 8 to 8½ cents. The major refiners were holding for 8½ cents with the exception of the Sinclair Refining Co., whose price was held at 8¾ cents. Gasoline was quite freely offered to the trade at 8 cents by refiners or marketers, the latter being able to purchase from either Oklahoma, North or West Texas at a price which made it possible for them to sell at 8 cents. There are some larger jobbers who can buy direct as cheaply as the marketer and they reported purchases made of U. S. Motor gasoline at 7¾ cents not only for immediate shipment but over the balance of the month. In commenting on the quality of the gasoline, one marketer said it was just the same gasoline the larger refiners bought up last year and shipped to their own stations and regular customers. There has been little or none of this buying by larger refiners from the smaller plants this season. In fact it seems to be a cause for the lack of strength in the July gasoline market that there has been none of this buying for it has left the smaller refiner to dispose of his gasoline to the jobber or marketer as best he could and at the best price he could secure. It was only when the major refiners reduced their price for gasoline that the trade here gave up predicting "large buying by some major companies." There was never any real detail to the reports circulated but at times these statements came from sources that secured from them a certain degree of belief from even the most skeptical.

Hand to Mouth Demand

The demand continues to be almost wholly of the hand-to-mouth order. Jobbers reason among themselves that the market has grown less strong right at the beginning of the best part of the year for gasoline sales and so far as they can learn there is nothing in the situation that makes them believe prices will at the very best do more than hold their own and there is under such conditions a possibility of further declines. It will take some weeks of good business to change this opinion and by that time the needs of the peak month of the season will at least have been provided for. There will be under usual conditions little more large buying for July requirements. The materials called for are U. S. Motor and the antiknock of specials. There is very little doing in higher test material than the U. S. Motor grade. Export business is very light here. Refiners who are seeking the business of dealers in Ohio and parts of other states east of this city state it is almost impossible to find just what the gasoline market is in these sections. Quotations are reported of delivered material which figure at the difference in freight, close to 7 cents Group 3. If, as is reported, the Ford Motor Co. bought its July gasoline requirements at 10¾ cents delivered, this would figure 9½ cents East Chicago or 7.05 cents Group 3 which shows the impossibility of the Group 3 refiner securing this business at a profit-making price. Natural gasoline has been rather quiet here with local prices a little easier in car lots.

Kerosene Quiet and Easier

Kerosene is quiet and easier with the trade quoted a price for the most part of 5½ cents although some larger refiners are asking 5¾ cents for their kerosene. There is no outlook for any immediate change. The demand for distillates has been somewhat better than for kerosene but the market has not been really active. There is more contracting for the coming season than shipping of material. Some days there is a little business doing for immediate delivery but the real movement will begin next month. Prices are steady with some holding a firm price for their known quality product. Refiners who have established a reputation for their product are not making much of an effort to secure business or new contracts as they feel sure they will have little trouble in selling their output. The demand so far as it depends on the number of burners in use is certain to be larger than last year.

Gas Oils Firm

Gas oils are, if anything, a little more firm in this market although it is hard to say. They are no less strong. Some refiners are asking more money for their product and there are no declines in important refinery prices. The demand from the industries for straightrun gas oil is seasonable but not large. Gas company buyers are making some purchases but are not very active although there are reports of renewals of old contracts which both sides claim were made at satisfactory prices. The demand from the crackers is given as the reason why some of the usual sources of supply have no gas oil to sell. Much material is coming from West Texas, some of it very desirable oil except the gravity is not a full 32-36, but it does give the required distillation and some of the gas companies prefer it. The zero gas oil is being held by most refiners for their winter use. It might be difficult to move any quantity right now as the demand is moderate at best. There is little industrial demand and competition is very keen for any sizeable orders.

Fuel Oil

The fuel oil market continues to move along with the bulk of the business coming from contract accounts.

The movement of fuel oil continues large and absorbs the output of the refineries according to reports made. There are some parts of the country where there is some accumulation of heavy fuel oil and one of these is West Texas. Probably not all the refiners have more fuel than they want to carry but some are very anxious for business and have indicated to some buyers their willingness to let the buyer write his own ticket if he will give a real order. Prices show no real change. One of the largest of the local sources of supply has advanced its prices on the entire line from 18-22 high sulphur fuel oil up to its 32-36 blended fuel oil and is holding to the advance. The present demand for the low sulphur, higher gravities is not very large but the

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Eastern Gasoline Is More Unsettled

Gas Oil Easy and Cylinder Stocks Have Developed Further Softness. Competition Is Increasing Despite the Increased Demand

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, July 15.—Refined products markets in the East have lost a little of their former firmness this week. Gasoline is more unsettled, kerosene and gas oil are easy, and cylinder stocks have developed further softness. Competition for spot business continues keen, and some concessions are being granted on stocks where supplies are large.

The gasoline market is becoming more competitive, notwithstanding the steady increase in volume. Current sales in both tank car and tank wagon markets are running at probably the heaviest levels attained thus far in the year, but leading interests here are apparently at odds regarding spot values.

Standard of New York at the close of June advanced the tank car market a full cent per gallon and was followed by Warner-Quinlan. Other refiners were expected to go up the latter part of last week, and indeed several were reported to have made the advance. Investigation, however, discloses that only the two companies named actually went to the 11-cent level in their bulk price, and the other refiners are still holding their markets at 10 cents per gallon. It is now problematical whether the 11-cent figure will be maintained in the face of this competition, and the easier gasoline markets ruling in Group 3 territory.

Advance Improbable

A number of interests in the eastern territory, it is reported, are convinced that a tank wagon gasoline advance is in line at this time, but are hesitant about taking the initiative in an upward move. The leading factors, on the other hand, have shown no inclination to put the retail price up, and there is less likelihood now of an early increase in the tank wagon quotation than there was a week ago. It is evident that the leading interests in the East Coast territory are taking the national market position more closely into consideration in developing their operations than at any other time in the history of the industry. It is contended in some quarters that leading interests in the East are opposed to any general marking up of gasoline prices, notwithstanding the seasonal increase in consumption, on the ground that higher gasoline prices at this time would tend to encourage further overproduction of crude oil and militate against the success of the industry's move to bring about curtailment of production and conservation of national petroleum resources.

Another factor which is looming up more seriously in determining the course of the gasoline market in this territory is the larger supply of California gasoline now moving eastward. The competition of this West Coast motor fuel is being seriously felt in many quarters of the East, and it is reported that the Pacific Coast product is being sold as far inland as Indiana in competition with not only East Coast gasoline, but motor fuel from the Group 3 territory as well. In some respects, the current position of California gasoline from a competitive standpoint is reminiscent of the market of some few years ago, when the Pacific Coast product was being largely sold all through the eastern territory and as far inland as Indiana and Ohio, in competition with the sources of supply normally taking care of these markets. California refiners now have a large stock of gasoline on hand, plenty of cheap crude available for further operations, and are in a favorable position to meet competition in developing new markets.

The feeling is growing in East Coast market quarters that California gasoline is a factor which must be dealt with not only in home markets, but in export selling operations as well.

Tank Car Gasoline

Standard Oil Co. of New Jersey continues to quote the market at 11 cents, with one other seller reported adhering to this figure. Other large refining interests, however, are offering at 10 cents and show no signs of planning any early advance. As a result there has been some falling off in future business, jobbers preferring to hold down their operations to a week-to-week basis in most instances.

Demand from the jobbing trade has picked up considerably, and tank car movements at refineries is at peak levels in most instances. In some sections jobbers are again operating largely against marginal contracts, owing to the narrow spread between the tank car and tank wagon basis in sections where the 11-cent tank car quotation makes the market.

Premium gasolines are coming in for slightly better buying as the vacation season develops. The demand for this higher test motor fuel is particularly good in the mountainous sections of the East Coast area.

Tank Wagon Gasoline

There have been no general revisions in the tank wagon basis in the East Coast area, although the market position continues strong. Many interests which had been looking for an early upward revision in schedules throughout the territory now believe the advance will be deferred owing to unsettled conditions in the market at refineries, and the tendency on the part of large interests to hold down the prices because of the unfavorable effect of a high gasoline market on the crude situation.

Demand for gasoline continues active, and tank wagon delivery departments are busy keeping retail distributors supplied. Shell is now in New York City in a fairly large way, and a number of Richfield stations are also making their appearance in the metropolitan territory.

Retail gasoline prices are showing considerable variance. Leading brands are listed at 21 cents at the pumps, including the 2 cent state tax. A number of stations are selling gasoline "tax free," which is another way of cutting the price 2 cents. Some independent gasolines are available at retail at as low as 17 cents. In an effort to meet this competition some stations handling leading brands of gasoline have adopted a sales policy where they will give motorists one gallon of gasoline free with every ten gallons bought. The leading refining and marketing companies, operating their own retail stations, are generally maintaining prices at posted levels.

Tank Car Kerosene

There is plenty of kerosene available in the bulk market, and it is still a buyers' market in most respects. The 8 cents quotation for water white in tank cars at refineries has definitely gone by the board, and all interests are now freely offering for prompt shipment at 7¾ cents. Jobbing demand has fallen away considerably, but refiners are looking for an early revival in trading, a good demand from vacation centers generally setting in toward the latter part of July.

Refinery stocks of kerosene are understood to be fairly heavy in some quarters, reflecting the combined effects of slack domestic consumption and lighter export demand, and it would not be surprising to see the market ease off further before any recovery.

The recent reduction of three-quarters cent in the export price basis at the Gulf has stimulated export inquiry for illuminating oil somewhat, and East Coast refiners are looking for an early revival in buying for abroad. Refiners in this area have been following the policy of quoting on export business at the Gulf basis, with the usual freight differentials.

Tank Wagon Kerosene

Marketers continue to hold the market unchanged at 15 cents, and it is not expected any revision will be made, notwithstanding current softness in the bulk market. The current quotation has ruled for more than a year and a half.

There has been some improvement in the demand for tank wagon deliveries throughout New England, and local distributors report their sales in upstate markets are also on the increase. Kerosene is largely used for illuminating and cooking purposes in summer camps and resorts, and with a larger percentage of the urban population migrating to "the summer place," summer business in kerosene is becoming more and more of a factor in the annual sales totals. Manufacturers of gasoline lamps and stoves have developed many refinements and improvements during recent years, and gasoline is now becoming a competitor of kerosene in the summer field. However, the consumption of gasoline for cooking and lighting purposes is not "a drop in the bucket" alongside the gallonage of kerosene used for these purposes.

Lubs

Further softness has developed on some grades under continued quiet trading. Spot 600 steam refined cylinder stock is off 2 cents at 36 cents, with 635 down 2 cents at 38 cents, and 650 steam refined 2 cents lower at 43 cents. Prices on other grades of cylinder oils are without change. As is usually the case on a declining market, buyers are withholding business as much as possible, in an effort to force prices lower, and to avoid any inventory losses which might develop on further declines in prices for lubs which they might buy at current going prices.

Pennsylvania refiners have shown some tendency to do business at moderate concessions, but it is reported current bid prices are too far under refiners' price ideas to permit of much trading. Refiners take the position that the statistical position does not justify a further general decline, and hold that the readjustments made during the previous week have placed the market in line with existing conditions. The market is a waiting affair, and is expected to remain more or less at a deadlock until the urgency of buyers' requirements, or the urgency of sellers' needs for larger outlets, precipitates some movement.

Export operators have taken much the same viewpoint as domestic buyers, and very little new business for shipment abroad has been booked this week. Export buyers' price views are reported to be radically under those of domestic consumers in most instances.

Little change has developed in the market for red and pale oils. A good movement from refineries against existing contracts is reported, but new business is not running into large totals. There are no distressed stocks on the local market, and refiners report they are experiencing little difficulty in maintaining prices at previously prevailing levels.

Fuel Oil

Markets for bunker "C" have been well maintained at $1.05 per barrel, in bulk, f.o.b. East Coast refinery terminals, and leading refiners report that it is strong at that figure. As has been the case right along, the bulk of the movement has been centering on contracts with large steamship companies. This business is more or less of a fixture, a number of large refiners having booked substantial quantities clear through 1929, 1930 and 1931 at the present basis of $1.05.

Notwithstanding the top heavy stocks of bunker oil in some sections, the situation in East Coast territory appears well stabilized, and there is no general price shading reported. The large tonnage contracts give the buyer the privilege of covering his requirements in the open market if the open market quotation is 10 cents or more per barrel under the contract figure.

Refiners in this area do not appear to be perturbed over the growing trend of marine construction toward Diesel power. Notwithstanding that considerable new tonnage is being designed for Diesel and Diesel electric drive, there is nevertheless a substantial volume of new construction calling for oil burning motive power, and the leadership of steam continues. In any event, the trend toward Diesel is not one to alarm the refiners, in that they handle both the Diesel and the bunker "C" business.

Industrial consumption of fuel oil is slackening off somewhat, a seasonal development.

There is a growing belief in oil trade circles that a radical cut in California crude oil production is in sight, and it is pointed out that the constant addition of heavy crude and fuel oil to California holdings is responsible in large measure for the present unfavorable statistical position. Thus, it is contended, any material curtailment of production on the West Coast will react to the advantage of the entire industry, and will improve the market picture in all sections.

Diesel Oil

Leading refiners continue to hold the market at $2 per barrel, at terminals, and note a firm market, with continued favorable demand. There have been no changes of outstanding importance, save that further reports of favorable developments in research work to prove the practicability of Diesel oil as a fuel for aircraft motors have been heard, both here and abroad.

With warm weather at hand, and the yachting season getting under way, refiners are getting a substantial volume of business from pleasure craft. There are a number of new Diesel buring private yachts of large tonnage in commission, and the oil consumption is large. This is not surprising when it is figured that a number of these vessels represent investments of from $750,000 to $1,500,000, and several are as large as small coastal steamers.

Refiners report stocks of Diesel oil in East Coast territory are well in hand, with consumption still moving readily into consuming channels. The high tanker charter rate from California to Atlantic Coast ports is acting as an effective bar to the movement of California Diesel oil stocks eastward to sell in competition with the eastern product. Gulf Coast operators have enough of a market at home to take care of their own Diesel output.

Gas Oil

The market is a little softer, with the leading seller now quoting at 5¼ cents, as contrasted with the previous quotation of 5½ cents per gallon. However, the 5½ cents figure has been more or less nominal for some months, as other sellers have been freely offering at a half cent or more under this basis. Thus, while the market

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Natural Gasoline Manufacture

Research Committee Explains Program to Be Followed in 1929

The board of directors of the Natural Gasoline Association of America at a meeting in Tulsa Tuesday approved the research program for the coming year as submitted by the association's research committee.

The committee recommend that Dr. G. G. Brown of the Chemical Engineering Department of the University of Michigan be retained another year as head of the association's research work. Doctor Brown will first complete the work on volatility in motor fuels. He has directed this work for the past three years and from time to time had made reports showing the progress made.

This work will be completed and a booklet issued explaining all phases of the research work covering not only volatility but other characteristics of gasoline used as motor fuel. This booklet will be issued by the association bout January 1, 1930.

"I feel that this work will be an outstanding contribution to the literature," D. E. Buchanan, vice president of the Chestnut & Smith Corp. and chairman of the research committee, said in explaining the committee's recommendation. "At present there is no complete treatise of this subject and our research work in the past three years has considered the problem from every conceivable angle."

Other members of the research committee are: H. B. Bernard, Sinclair Oil & Gas Co.; E. R. Filley, The Texas Company; W. A. Melton, Shaffer Oil & Refining Co.; W. W. Robinson, Jr., The Texas Company of California, and S. S. Smith, Shell Petroleum Corp.

METHOD FOR REMOVING ALL DISSOLVED GASES

WASHINGTON, D. C., July 15.—"An improved method for removing and collecting dissolved gases from liquids has been developed," according to a statement made at the Bureau of Standards.

"It has been found, for example, that under proper conditions the amount of oxygen dissolved in water may be reduced to less than 0.0001 per cent by only one sublimation. Ammonia, carbon dioxide, and many other gases, may be completely removed from liquids. This is of importance in accurately determining the vapor pressure conductivity, and density of pure liquids.

"The investigation was conducted at the Bureau of Standards, where it was discovered that, through the principle of vacuum sublimation, gas-free liquids could be prepared without appreciable loss of either liquid or dissolved gas. These liquids are used in the determination of physical constants, one of the primary functions of the bureau."

PLANT ON GAS LINE

Construction work will start this week on an oil absorption plant at Wewoka, Okla., by the Independent Natural Gas Co. The new plant will be located on a gas line owned by the Independent Natural Gas Co. which is owned by the Independent Oil & Gas Co. The plant will have an output of 4,000 gallons daily.

GRIMES PLANT OPERATING

The plant built by C. W. Grimes and Park Grimes at Keystone, Okla., is now operating. The gas supply of the plant is secured from a new pool near Keystone. The present output of the plant is 1,000 gallons daily.

HOW TO START AND STOP STEAM ENGINES AT PLANTS

By J. F. Morris
Columbian Gasoline Corp.

Owing to the great variety of engines and valve gears in use to the great difference in the sizes and power of steam plants, general instructions with a few examples can only be given.

The engines having previously been put in thorough order, open the drain cock on the steam pipe just above the throttle in order to drain water out and warm up steam pipe. When steam pipe is thoroughly warmed up and steam flows through the drain pipe, close the drain cock and open the throttle just enough to let a little steam flow into the valve chest and cylinder or use the by-pass around the throttle, if one is fitted.

Open the cylinder relief valves (or drain cocks), also the drain cocks on the valve chest and exhaust pipe, if noncondensing engine. If cylinders are jacketed, turn the steam into the jackets and open the jacket drain cocks. While the engine is warming up, fill the oil cups and sight-feed lubricator. Squirt a little oil into all the small joints and journals that are not fitted with oil cups. Wipe off the guides with oily waste and squirt some oil over them. By this time the engine is getting warm; if fitted with by-pass valves, use them to admit steam into both ends of the cylinder. Further operations of warming up the cylinder will depend somewhat on the type of engine and valve gear. In general, however, all cylinders should be warmed up slowly, as sudden and violent heating of a cylinder is very liable to crack the casting by unequal expansion.

In attending to these preliminary arrangements certain precautions should be taken. For example, stop-valves and throttle valves should never be opened quickly or suddenly, and thus permit a large volume of steam to flow into a cold steam pipe or cylinder. If this is done, the first steam that enters will be condensed and partial vacuum will be formed. This will be closely followed by another rush of steam with similar results and so on until a mass of water will collect which will rush through the steam pipe and strike the first obstruction, generally the bend in the steam pipe near the cylinder, with a force of a steam hammer, and in all probability will carry it away and cause a disaster. This is called a "water hammer" and has caused many serious accidents.

Throttle Valve

Another precaution that should be taken is the casing of the throttle valve on its seat before steam is let into the main steam pipe; otherwise, the unequal expansion of the valve casing may cause the valve to stick fast and thereby give much trouble. Even if a by-pass is fitted around the throttle, it would be better not to depend on it. Considerable space has been devoted to the subject of warming up and draining the water out of the steam pipe and engine on account of its importance. Water being non-compressible, it would be an easy matter to blow off a cylinder head or break a piston if the engine were started when there was a quantity of water in the cylinder.

The last thing for the engineer to do before taking his place at the throttle preparatory to starting the engine, pro-

(Continued on Page 141)

DISMANTLES OXFORD PLANT

The Shell Petroleum Corp. is dismantling one of its oil absorption plants located near Oxford, Kans. The plant is located in NE Section 14-32s-2e. It had a rated capacity of 6,000 gallons daily. The equipment is being moved to the Shell's McCullough lease near Marshall in Logan County, Oklahoma. The engine and compressor units will be used in gas lift operations.

BAKER ASSISTANT VICE PRESIDENT OF SINCLAIR

W. W. Baker for several years in charge of natural gasoline plant construction for the Sinclair Oil & Gas Co. has been appointed assistant vice president of the company. In his new work, Mr.

W. W. Baker

Baker will have charge of the Sinclair gasoline plant department with headquarters in Tulsa. H. B. Bernard, vice president of the Sinclair company will continue in general charge of the department.

Mr. Baker is well known among natural gasoline manufacturers in the Mid-Continent Field. In the past two years the company has been active in plant construction in the Seminole area of Oklahoma where the company is the largest manufacturer of natural gasoline.

BUILD STABILIZING PLANT

HOUSTON, Tex., July 15.—The Phillips Petroleum Co. is preparing to build a natural gasoline stabilizing plant on a tract of land with a frontage on the Houston Ship Channel, according to information here. The site adjoins the property of the Crown Central Petroleum Co., whose shipping facilities will be used in the loading of tankers for the movement of gasoline.

The Phillips company recently has been moving large quantities of natural gasoline from Mid-Continent points to the Crown Central storage. The new plant will be used to stabilize this gasoline to meet the specifications of foreign buyers.

PANHANDLE OPERATING PLANT

The Panhandle Refining Co. of Wichita Falls, Tex., has starting operating a six-unit gasoline plant in the Bryson Pool of Jack County, Texas. This is a new area for gasoline plant operation.

The gas has a gasoline content in excess of 2 gallons per 1,000 cubic feet. The residue gas from the plant is recycled in the well.

NEW PLANT FOR GRAY COUNTY

Cockrell, McIlroy and associates of Amarillo, Tex., are making preparations to build a gasoline plant on the Clayton farm of Gray County. The farm is located in Section 50, Block 25, H. & G. N. survey. It is expected that the residue gas will be sold to carbon black plants.

A PRACTICAL SUGGESTION

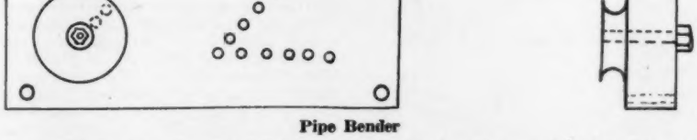
PIPE BENDER

The substitution of graceful sloping large arc pipe bends for right angle sharp turns has increased very rapidly since the astonishing results of slippage, friction and back pressure in gas lift installations. Several manufacturers are factory fabricating pipe turns which are being used extensively.

The pipe bender described here is applicable for 2-inch pipe and smaller. It may be set for any bend desired by adjusting the wheels and then duplicate bends can be made accurately. The wheels are moved to different holes that are bored in the plate and a wide range of curvature is obtainable.

The wheels have a concave surface which minimize the possibility of buckling, kinking, flattening or side twisting. Some machines use an internal mandrel but this is seldom needed with this tool. The use on an internal mandrel is determined mostly by the ratio of the thickness to the diameter of the pipe. Where the wall is relatively thin something inside is necessary to prevent crumpling or collapsing.

The tool is placed in a vise or since it carries a bolt hole in each corner of the plate, it can be bolted securely to studdings or beams.



Pipe Bender

Practical suggestions by those connected with the cons.ruction and operation of natural gasoline plants are invited. Payment will be made as soon as suggestions are accepted. Address all communications to the Natural Gasoline Department, The Oil and Gas Journal, Tulsa.

Brief Items for Petroleum Refiners

To Start Operating Trenton Refinery of White Star Company

The new refinery of the White Star Refining Co. at Trenton, near Detroit, Mich., has been completed and part of the plant is now operating. Complete operation has been delayed due to pipe line difficulties in the delivery of the crude oil. It is expected that crude oil runs to stills will start this week. At present the Dubbs cracking units are operating with cracking stock obtained from other refineries.

Built exclusively of new equipment, the plant incorporates the latest features in the design of skimming and cracking equipment. The plant when fully completed will represent an expenditure of approximately $3,000,000. It is located on a 60-acre tract, 18 miles from the center of Detroit. It adjoins the tracks of the Detroit, Toledo and Ironton Railroad and 4 miles from the Detroit River, from which it secures its water supply. The plant is to be operated with Mid-Continent crue oil secured from the Prairie Oil & Gas Co. This oil will be delivered by the Buckeye Pipe Line Co., which connects to the Prairie Pipe Line Co. in Ohio. The plant has a rated crude oil capacity of from 5,000 to 6,000 bbls. daily.

The present storage capacity of the refinery is to be enlarged. Contracts have been let for the construction of six 80,000-bbl. storage tanks near the refinery. The plant is the only one operating in the Detroit area and it is expected that the company will be able to dispose of all refined products within a short distance of the refinery. The company has a large number of bulk and service stations in Detroit.

The White Star company will continue to operate its refinery at Wood River, Ill. This refinery, which has been operated for several years, has a rated capacity of 5,000 bbls. daily.

AIRPLANE CONSUMPTION OF GASOLINE INCREASES

Up to May 1 there were 390 municipal airports and 387 commercial airports and approximately 600 intermediate and emergency airports, according to a report by Secretary of Commerce Robert L. Lamont. Most of these airports have facilities for supplying motor fuels and oils. The report was made in connection with the third anniversary of the aeronautics branch of the Department of Commerce July 1.

In his report Mr. Lamont outlined the growth of the airplane industry and predicted greater progress than in the past. It was estimated that for the year ending January 1, 1929, the distance flown by airplanes totaled 60,000,000 miles. This would indicate a gasoline consumption of 10,000,000 gallons. This was a 100 per cent increase over the estimate for 1927. It was estimated that transport airplanes the first six months of this year flew 8,000,000 miles, compared with a total of 10,500,000 miles for all of 1928.

Mr. Lamont stated that on July 1, 10,000 miles of airways were lighted. On that date 1,950 firms were engaged in the air industry. There were 6,585 licensed pilots and 5,673 unlicensed pilots.

Tri-motored transports driven at high speed are large consumers of gasoline. Each time, for instance, the Boeing transcontinental multi-engined passenger plane, now operated on the San Francisco Bay-Salt Lake unit, starts on its run, it lifts 400 gallons of gasoline, weighing 2,400 pounds, besides its cargo. Between the two points the engines burn approximately 455 gallons for the 640-mile flight. This is approximately equal to the average yearly consumption of an automobile.

SHELL ENTERS NEW YORK WITH CHAIN OF STATIONS

NEW YORK, July 14.—Shell Eastern Petroleum Products, Inc., coincident with its entry into the New York service station field, is conducting an advertising campaign advising motorists to "change to Shell."

In an advertisement in the city dailies this week the company says: "Shell comes to New York! To the seasoned motorist that is front page news. It means that the largest producer and distributor of gasoline and motor oil in the world is ready to serve you.

"Soon you'll be passing an increasing number of these new yellow and red Shell service stations. At any one you'll be able to buy the same high quality gasoline and motor oil that has given Shell its reputation not only throughout this country but in practically every civilized country on the globe.

"Shell controls every step in the manufacture of its products. It owns vast producing fields—owns great transportation facilities—operates its own refineries which are models for the industry. It has unlimited engineering and research facilities. It has one objective: to put at your command a uniformly better gasoline and better motor oil."

Activities of the Shell interests in New York will be directed by Shell Eastern Petroleum Products, Inc. This is a subsidiary formed to develop the last remaining territory in America not already under Shell influence. For the past 10 years Shell gasoline and oils have been an important factor in the automobile markets of Pacific Coast and Middle Western states.

RESTAURANT STATION FOR OKLAHOMA CITY

The Pierce Petroleum Corp. of St. Louis has announced plans for another large restaurant and service station to be constructed near Oklahoma City, on Highway 66. A 10-acre site has been purchased just outside of Oklahoma City and construction will start August 1. The first building will cost $350,000. Later a hotel and other buildings will be built.

The Pierce corporation at present has combination restaurants and service stations at Rolla and Springfield, Mo. A large hotel is under construction at Rolla. Restaurants and stations are under construction at Columbia, Mo., Miami and Tulsa, Okla. The Tulsa and Miami stations will be opened soon. Hotels are to be built at these points later.

NEW MUSKEGON TANKER

MUSKEGON, Mich., July 12.—One of the two new crude oil tankers in which the Simrall Pipe Line Corp. will move its Dundee oil from the Muskegon Field to the refining plant at Lemont, Ill., owned by the Globe Oil & Refining Co., was loaded and left on its maiden trip between the western Michigan and Illinois points.

The boat was chartered from the Petroleum Navigation Co. of New York, and is called Petroleum No. 3. It has a capacity of about 8,000 bbls. and left the Muskegon Harbor yesterday loaded to that capacity.

NEW YORK GASOLINE TAX AGGREGATES $1,388,610

Gasoline tax collections in the State of New York for May, the first month of the 2-cent gasoline tax, totaled $1,388,610.73, according to an announcement by the state treasurer's department. This indicates a gasoline consumption during May of 70,000,000 gallons, exceeding that of any other state with the possible exception of California, whose figures have not been announced.

As the last state, with the exception of Illinois, to adopt a gasoline tax, there has been considerable interest in market circles as to the quantity of gasoline consumed in New York State. The car registration exceeds that of any other state, and during the summer it is believed that the gasoline consumption will exceed California, although the latter State may have a larger yearly consumption due to the favorable motoring weather throughout the year. It was estimated when the tax law became effective that the first year's revenue would total $24,000,000.

New York State's share of the first month's collection will be $1,041,458.05; the city of New York will be paid $69,430.53, and $277,722.15 will go to the various counties, each of these counties receiving a sum based on the ratio that the mileage of public highways in the county, outside of cities and incorporated villages, not including state and county highways, bears to the total mileage of public highways in the State. Official maps indicate that there are 70,606 miles of such highways in the State, and the distribution is at the rate of a little over $3.93 a mile.

DETERDING AND CADMAN OPPOSE EXPORT RAISE

NEW YORK, July 16.—In connection with the visit of a committee representing the Export Petroleum Association, London cables today declare that Sir Henri Deterding, managing director of Royal Dutch-Shell, and Sir John Cadman, chairman of Anglo Persian Oil Co., are opposed to any advance in the Gulf export gasoline market at this time. Executives of leading British and Continental oil companies are reported to share these views.

Heads of petroleum industry in Great Britain are quoted in London Financial Times as stating, "The chance of maintaining oil prices at their present high level is very poor in consequence of the overproduction situation in the United States." Commenting on the price question the London Financial Times adds, Cadman and Deterding will not agree in any circumstances to an increase in export gasoline.

DAVID LEAVES CONTINENTAL

A. R. David, who has been general manager of refineries for the Continental Oil Co. for several years, has resigned to join the sales and engineering organization of the M. W. Kellogg Co. The manufacturing departments of the Marland Refining Co. and the Continental Oil Co. are being combined following the recent mergers of the two companies. General offices will be maintained at Ponca City, Okla., in charge of Walter Miller in charge of manufacturing.

DIXIE JOBBERS TO OPEN OFFICE

CHICAGO, July 12.—The Dixie Oil Jobbers who are now organized in 11 states are planning the early opening of an office in this city to handle routine matters for the entire organization. The manager has not been announced.

Several Changes in Refining Department Of Continental Co.

The recent merger of the Marland Oil Co. and the Continental Oil Co. has necessitated several changes in the manufacturing departments of both companies, which have been combined with headquarters in Ponca City, Okla. The manufacturing department of the combined companies, which take the Continental Oil Co. name, is headed by Walter Miller, vice president. Mr. Miller held the same position with the Marland company.

Harold G. Osborn has been appointed assistant manufacturing manager with headquarters in Ponca City. Mr. Osborn has been assistant to Mr. Miller for several years. Ray Russell, formerly chief engineer of the Continental company, has been appointed acting chief engineer. Mr. Russell is a graduate of Kansas University and was with the Continental company for five years.

L. L. Davis, until recently superintendent of the Ponca City refinery, has been appointed supervisor of the Process Division, a newly created department. The new division will have charge of process development work and research and control laboratories. C. F. Tears, formerly assistant to the general manager of refineries for the Continental, has been appointed assistant to Mr. Davis. R. E. Redfield of the Continental organization has been appointed combustion engineer.

Fred G. Fellows, formerly assistant superintendent, has been appointed superintendent of the Ponca City refinery. M. E. Clawson, who has been connected with the Marland company for the past 10 years, is assistant superintendent.

Other appointments include W. M. Haynes, resident engineer, and C. O. Melberg, assistant resident engineer; A. Henriksen, formerly chief engineer of the Ponca City refinery, is now chief chemist of the manufacturing division, and Joe Boylan, chief fire marshal of the manufacturing division.

VICTORY PETROLEUM BUYS WICHITA FALLS PLANT

The Victory Petroleum Co. of Delaware announces the purchase of a refinery located at Wichita Falls, Tex., owned by the Boardman Oil Co. The plant which has not been operated in the past two years was built in 1919 by the Sunshine State Oil Refining Co.

According to officials of the company the plant will be repaired and operated. The plant has capacity of 3,000 bbls. daily. Crude oil will be secured in the Wichita Falls area. J. E. Force is secretary of the company and will be general manager of refinery operations. C. B. Ray has been appointed refinery superintendent.

CONSTRUCTING NEW REFINERY

CHICAGO, July 13.—Construction of the new refinery storage of the Empire Oil & Refining Co. at East Chicago is progressing rapidly. The large storage tanks are rising rapidly and will be ready to receive the crude by the time that the pipe line is in operation. There will be 106 tanks of all kinds, with a total capacity of 2,000,000 bbls.

So far the building commission has issued building permits totaling $2,273,000. The list of permits includes the following steel tanks: Eight, 80,000 bbls.; fifteen, 55,000 bbls.; four, 25,000 bbls.; twelve, 10,000 bbls.; fourteen, 5,000 bbls.; six, 3,000 bbls.; twenty-seven, 2,500 bbls., and twenty 11 by 14-foot horizontal tanks.

EASY TONE IN CHICAGO GASOLINE MARKET

(Continued from Page 136)

supply is limited and refiners hold their price firmly as they remember the shortage in these grades last winter. So refiners are holding what they are not using for cracking stock. The mid-summer decline in the demand is apparent but it is not more than seasonable.

Lubs Unchanged

Lubricating oils show no change. One large refiner has been picking up practically all of the bright stocks available, going so far as to buy some cars from compounders and marketers who had some oil they could spare. Demand for motor oils while apparently quiet, is really of good volume and some of the compounders state they have been agreeably surprised at the increase in the volume of June sales over May which was with them a really dull month. Prices are firm with bright stocks in larger demand than supply, steam cylinder stocks active but neutrals showing little change.

Price Cutting Spreading

Salesmen who have been out through the territory report that there is an evident increase in the number of price cuts. One recently opened local station announces it proposes to sell regularly at 2 cents under the established price. With a station price of 17 cents here, the dealer would be able to do this at a profit provided he could have tank car deliveries to his station or the equivalent of that price and delivery which would make the cost of U. S. Motor gasoline laid down in this city not over 10⅜ cents. This shows the danger that comes from such a wide spread between the refinery costs and the price to the public. Many jobbers have stated they were planning to hold the market but they were afraid of an increase in the amount of price cutting especially if the spread should widen further as the touring season drew to a close and the consumption was less in volume.

The gallonage over July 4 was very large but owing to rain in some parts, the total movement was not so great as many expected. Some of the figures given out as to gallonage and the comparisons with last year are misleading though correct. For example one of the larger companies recently bought a string of stations which are estimated to sell some twenty million of gallons annually. The purchasing company will have a large increase in its gasoline sales but there will be no sales reported from the purchased company, which would, had it not sold its business, continue to be a buyer of gasoline from other refiners. The sales of the combined organization may not be as large as the sales of the two separate companies for the previous year, yet the purchasing company would have a large increase to report.

There is another side to the purchase of oil companies by refiners to add to their string of stations. Some refiner is bound to lose the business which it formerly secured from the seller. The first thing an integrated company does when it buys up the business of some oil company is to cancel all outstanding orders and contracts so far as it can. Very frequently the first intimation a refiner has that a customer has sold his business is the receipt of a notice from the buyer that the contracts which the former oil company had, have been cancelled. There are some instances where a refiner has taken over a customer to prevent that customer from selling out to some rival refiner and thus save that much business.

EASTERN GASOLINE IS MORE UNSETTLED

(Continued from Page 137)

is 5¼ cents on the part of the leading refiner, other large interests are freely offering at 5 cents, and a number of the smaller sellers are willing to book at 4¾ cents for immediate delivery. With cracking equipment operated close to capacity, there is quite a little re-run gas oil around, and the market tone is definitely easy in several quarters. As has been the case for several months, there is virtually no straightrun gas oil available on the open market. Refiners are using whatever stocks they may have as cracking oil, and it is probable any straight-run oil which might be offered on the open market at the prevailing basis would be immediately taken up by refiners to add to their reserves of cracking stock.

Withdrawals of gas oil by the large artificial gas companies are showing seasonal slackness, and are below the levels established earlier in the year. This condition is expected to continue until the middle of September, at which time the consumption curve normally shows an upward trend. Demand for low grade gas oil for use in domestic oil burners is also easing off, and a quiet routine market is looked for until well into the coming fall.

Paraffin Wax

The higher melting points are showing further weakness, and some shading of listed quotations is being done, sales at about an eighth cent per pound under quoted levels being reported in some instances. The amount of business going through at cut price levels is not sufficient to "make" the market, and it appears the situation will firm up shortly. Spot 130-132 a.m.p., in fact, is now generally held at 5 cents per pound, up a quarter from previously prevailing levels, and offerings of this grade for immediate shipment are not heavy.

Reports indicate many of the weaker holders of wax have liquidated their position, and buyers are finding it more difficult to locate refiners willing to meet their low price views. A number of large producing interests have consistently maintained over several weeks that market conditions did not justify the low prices prevalent on paraffin wax and have prophesied the market would react upward after the weaker holdings had been absorbed.

A slight pickup in export demand for wax, both crude scale and the refined grades, has been discernible, although considerable business for foreign shipment is still going through at price concessions.

Petrolatum

The advent of the holiday season has been accompanied by some slackening in new business on spot petrolatum, and markets are in quiet position on all grades. Prices remain steady, and contract deliveries are accounting for a good deal of current output. Much light inquiry now reaching the market is for white grades, although amber petrolatum is moving in slightly better volume. Dark green has sold in moderately large quantities for export, with sellers still quoting 2 cents per pound and buyers bidding 1.75 to 1.90 cents per pound at Bayonne.

Export Markets

Two gasoline cargoes were fixed for France this week at prevailing quotations at the Gulf. The first involved 6,500 tons of 64-66 and Navy, with the second made up of 6,300 tons of 64-66 and Navy, and 1,200 tons of kerosene.

Several inquiries are in the market for gasoline for shipment to the Continent, but shortage of boats is holding back this trading. At present it is extremely difficult to locate clean tankers for the transatlantic trade, and the charter rate is considerably higher. The last fixture for gasoline transportation from United States Gulf ports to the Continent was at 22s. 6d., compared with the low figure of 13s. reached earlier in the year.

Small lot business in kerosene, both bulk and cased stocks, is reported to have shown some improvement, with fair quantities moving to South America, Europe and South Africa.

Export demand for lub oils has been practically at a standstill this week, in so far as cylinder stocks are concerned. Buyers are looking for further price declines, and are holding off the market until the situation shows signs of stabilization.

Paraffin wax business has been a little better, but export buyers are still low in their price views, and this is tending to slacken trading a little.

There was no change in the situation affecting export trading in other refined products.

Petroleum Exports

The following table shows principal exports of petroleum and refined petroleum products from New York during the past three weeks (all figures in gallons unless otherwise noted):

	Week Ended—		
	July 6	July 29	June 22
Gasoline	205,000	485,200	421,000
Naphtha	2,000	3,568,000	605,000
Kerosene	33,000	40,500	388,000
Fuel Oil	168,900	60,500	14,000
Lubricating oil	1,820,800	2,206,400	2,269,000
Petroleum, refined	274,400 Pounds	1,003,200 Pounds	932,000 Pounds
Petrolatum	.....	.....	.....
Paraffin wax	1,902,400	814,000	817,000
Refined	265,000	382,000	.....
Scale	437,000	101,000	.....
Lubricating grease	556,400	601,400	1,233,000

Imports

Imports of crude and refined oils at the principal United States ports for the week ended July 6 totaled 2,034,000 bbls., a daily average of 290,571 bbls., compared with 2,184,000 bbls., a daily average of 312,000 bbls for the week ended June 29. Details follow:

	Bbls. of 42 Gals.
At Atlantic Coast ports—	
Baltimore	164,000
New York	955,000
Philadelphia	403,000
Others	100,000
Total	1,622,000
Daily average	231,714
Gulf Coast ports—	
Galveston district	82,000
New Orleans-Baton Rouge	100,000
Port Arthur and Sabine district	230,000
Total	412,000
Daily average	58,857
At all United States ports—	
Total	2,034,000
Daily average	290,571

California Oil Receipts

Receipts of California crude and refined oils at Atlantic ports during the week ended July 6 totaled 680,000 bbls., a daily average of 97,143 bbls., against 381,000 bbls., a daily average of 54,429 bbls. for the week ended June 29. Details follow.

	Bbls. of 42 Gals.
Baltimore	114,000
Boston	70,000
New York	273,000
Philadelphia	198,000
Others	25,000
Total	680,000
Daily average	97,143

Distribution of total California oil receipts is as follows:

Crude	70,000
Gasoline	610,000

There were no receipts of California oils reported at Gulf ports for the week.

With the start of summer motoring season at hand, receipts of California gasoline are becoming more general at all principal Atlantic Coast gasoline distributing points. Baltimore is expected to be a heavy receiver of California gasoline, as it is indicated marketing operations on the part of some California interests now active in eastern markets will be centered to some extent at that port, which will supply Maryland and Pennsylvania, as well as adjoining territory.

Tanker rates on California gasoline for shipment to the East Coast continue strong, and this factor is expected to restrict the operations of independent marketers on California motor fuel. Under existing conditions, it is more profitable for eastern distributors to buy their gasoline laid down at the nearest port from one of the several leading California refining interests which are now actively selling in the East.

HOW TO START AND STOP STEAM ENGINES AT PLANTS

(Continued from Page 139)

vided he has no oiler, is to start the oil and grease cups feeding. It is well to feed the oil liberally at first but not to the extent of wasting it; finer adjustment of the oiling gear can be made after the engine has been running a short time and the journals are well lubricated.

After an engine has been stopped after a run and everything has been made secure, the machinery should be wiped off before the oil has had time to set. Both the bright work and the painted parts should receive attention in this respect. If there are any rusty spots on the bright work they should be scoured off with emry cloth. The floors should also be cleaned up and all dirt gathered together and consigned to the waste heap. Cleanliness is essential to a well-kept engine room. Oil should not be spilled or spattered about; it is a waste of oil. Drip pans should be placed wherever they will do any good. Much saving in oil bills will be effected by the use of an efficient oil filter to filter the drip oil and use it over again instead of throwing it away.

When flour emery or emery cloth is used for cleaning bright work, the greatest care should be exercised not to let any of the grit get into the journals, they will be sure to cut if any substance of a gritty nature gets into them. All the oil holes in the small joints and journals that are not fitted with oil cups should be plugged up immediately after the engine is stopped and kept closed until the engine is ready to be started again. Emery should not be used to polish brass or composition; bath brick is much better for this purpose.

SECOND WRIT TO TEST LAW ON OIL PERMITS

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 15.—A second writ of mandamus has been filed in the Supreme Court of the District of Columbia to compel the Secretary of the Interior to issue a prospecting permit to George G. Rotherford of Taft, Calif., by Lewis E. Hoffman of this city, attorney for Mr. Rotherford. This action was taken on an application filed by Rotherford for a tract of 560 acres in California.

The points of law involved are the same as those that arose in the case of Ethel M. McLennan of McKittrick, Calif., on the ground that under the oil leasing act the Secretary of the Interior had no discretionary power to deny such a permit to a qualified applicant and that no policy of the President could have any effect on the rights of a qualified applicant to obtain a permit under this act.

The distinction between the two cases is one of fact. In the McLennan case the lands applied for by Ethel M. McLennan were included in a canceled permit, and there were others besides Mrs. McLennan, who had applied for the lands, which necessitated the holding of a drawing to determine the successful applicant. In this case no drawing was held, and Rotherford was the only one who applied for the lands.

In this case Mr. Hoffman further attacks the right of the Secretary of the Interior to carry out his order of May 3, 1929, which recognizes expenditures made for reliable geological surveys upon lands embraced in oil and gas applications pending on March 12, 1929, claiming there is nothing in the oil leasing act which requires an applicant for permit to undergo any large expenditures for geological surveys, and it is unfair to give preference to one making such expenditures, as such preference will operate in favor of the larger companies against the independent oil operator.

The adoption of the administration's oil policy is, in the opinion of Mr. Hoffman, a usurpation of the powers of Congress and a nullification of the oil leasing act.

Mr. Hoffman intends to file two other test cases involving other points in the oil leasing act, and will endeavor to have hearing held during the October term. The questions of law will undoubtedly finally be determined by the United States Supreme Court.

The following states will be particularly interested in this case: Arizona, Idaho, New York, Oklahoma, Texas, Washington, California, Montana, Nevada, Oregon, Utah, Wyoming, Colorado, New Mexico, North Dakota and South Dakota.

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

	July 16		July 9		July 2	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.08	.08½	.08¼	.08½	.08¼	.08¾
56-58 450 endpoint	.07¾	.08	.08	.08¼	.08¼	.08¾
58-60 450 endpoint	.07¾	.08	.08	.08¼	.08¼	.08¾
*58-60 437 endpoint (U. S. Motor)	.0853		.0895		.0923	
*60-62 437 endpoint	†.08¼	.08½	.095		†.09	.09¼
*60-62 400 endpoint	.0883		.095		.0925	
*64-66 375 endpoint	.0925		†.09¼	.09½	.095	
68-70 360 endpoint	.08¾	.09	.09¼	.09¾	.09¼	.09¾
64-66 437 endpoint (blend)	.08	.08¼	.08¼	.08½	.08½	.08¾
NORTH TEXAS—						
56-58 450 endpoint	.07¾	.08	.08	.08¼	.08¼	.08⅜
58-60 450 endpoint	.07¾	.08	.08	.08¼	.08¼	.08⅜
58-60 437 endpoint (U. S. Motor)	.07¾	.08¼	.08⅛	.08½	.08¼	.08¾
60-62 400 endpoint	.08	.08¼	.08¼	.08½	.08½	.08¾
64-66 390 endpoint	.08¼	.08¾	.08⅛	.08⅝	.08⅝	.08¾
64-66 375 endpoint	.08½	.08⅝	.08⅜	.08⅞	.08¾	.09
68-70 360 endpoint	.08½	.08¾	.08¾	.09	.09	.09¼
64-66 437 endpoint (blend)	.07¾	.08	.08¼	.08½	.08½	.08¾
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.09¼	.09½	.09¼	.09½	.09¾	.10
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.09¼	.09½	.09¼	.09½	.09¾	.10
PENNSYLVANIA—						
52-54 Naphtha	.09	.09½	.09	.09½	.09	.09½
54-56 Naphtha	.09½	.09¾	.09½	.09¾	.09½	.10
58-60 Gasoline	.10	.10¼	.10	.10¼	.09¾	.10
60 Gasoline	.10¼	.10½	.10¼	.10½	.10¼	.10½
62 Gasoline	.10½	.11	.10½	.11	.10¼	.10½
64 Gasoline	.11	.11¼	.11	.11¼	.10¾	.11
68-70 350 endpoint gasoline	.12	.12½	.12	.12½	.11¼	.11½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.09	.10	.09	.10	.09	.10
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.08	.08½	.08¼	.08½	.08½	.08¾
56-58 450 endpoint	.07¾	.08	.08¼	.08½	.08½	.08¾
58-60 437 endpoint (U. S. Motor)	.08	.08½	.08¼	.08¾	.08½	.09¼
60-62 400 endpoint	.08⅜	.08¾	.08⅜	.08¾	.09⅛	.09⅜
64-66 375 endpoint	.08¾	.09¼	.08⅝	.09	.09⅜	.09¾
68-70 360 endpoint	.08⅞	.09⅜	.08¾	.09	.09¾	.10
64-66 437 endpoint (blend)	.08⅛	.08½	.08⅛	.08⅝	.08¾	.09
GULF COAST (Export)—						
58-60 (U. S. Motor)	.08½		.08½		.08½	
60-62 400 endpoint	.09½		.09½		.09½	
61-63 390 endpoint	.09¾		.09¾		.09¾	
64-66 375 endpoint	.10		.10		.10	

*Weighted average prices July 15, 8 and 1, as reported by representative refiners. Sales to jobbers only. †No sales reported. Price indicated is general market

*Louisiana, Arkansas, Mississippi, East Texas delivery.

NATURAL GASOLINE

	July 16		July 9		July 2	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06½	.06½	.07	.07¼	.07	.07⅜
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¼	.06½	.07	.07¼	.07	.07⅜
Grade B, 76-83.9, 375 e.p., rec. 85%	.05½	.05⅝	.06¼		.06¼	.06⅜
Grade BB, 84-92, 375 e.p., rec. 85%	.05½	.05⅝	.06¼		.06¼	.06⅜
Grade C, 80-90, 375 e.p., rec. 78%	.05½	.05¾	.06¼		.06¼	.06⅜
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06⅛	.06¼	.07	.07¼	.07	.07½
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¼	.06¼	.07	.07¼	.07	.07½
Grade B, 76-83.9, 375 e.p., rec. 85	.05½	.05¾	.06¼		.06¼	.06⅜
Grade BB, 84-92, 375 e.p., rec. 85%	.05½	.05¾	.06¼		.06¼	.06⅜
Grade C, 80-90, 375 e.p., rec. 78%	.05½	.05¾	.06¼		.06¼	.06⅜
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.06½		.07¼	.07⅜	.07½	.07⅝
Grade BB, 84-92, 375 e.p., rec. 85%	.06	.06¼	.06½	.06¾	.06¾	.07
Grade C, 80-90, 375 e.p., rec. 78%	.06	.06¼	.06½	.06¾	.06¾	.07
CALIFORNIA—						
75-78 375-390 endpoint	.08¾	.09¼	.09	.09½	.09	.09½
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06	.06¼	.07	.07¼	.07	.07½
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06	.06¼	.07	.07¼	.07	.07½
Grade B, 76-83.9, 375 e.p., rec. 85%	.05½	.05¾	.06¼		.06¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.05½	.05¾	.06¼		.06¼	
Grade C, 80-90, 375 e p., rec. 78%	.05½	.05¾	.06¼		.06¼	

BURNING OIL

	July 16		July 9		July 2	
OKLAHOMA (Group 3)—						
41-43 water white kerosene	.05¼	.05½	.05½	.05¾	.05½	.05¾
42-44 water white kerosene	.05⅞	.06⅛	.06	.06⅛	.06	.06⅛
***NORTH LOUISIANA—**						
41-43 water white kerosene	.06¼	.06½	.06½	.06¾	.06½	.06¾
NORTH TEXAS—						
41-43 water white kerosene	.05	.05¼	.05¼	.05½	.05¼	.05½
40-42 water white kerosene	.04⅞	.05	.05⅛	.05¼	.05⅛	.05¼
***ARKANSAS—**						
41-43 water white kerosene	.06½	.06¾	.06½	.06¾	.06½	.06¾
PENNSYLVANIA—						
43 Kerosene prime white	.06	.06⅛	.06	.06¼	.06¼	.06½
45 Kerosene water white	.06	.06¼	.06⅛	.06⅜	.06¼	.06½
46 Kerosene water white	.06½	.06¾	.06½	.06¾	.07	.07¼
47 Kerosene water white	.06¾	.07	.06¾	.07	.07¼	.07½
300 Mineral Seal	.07¼	.07½	.07¼	.07½	.07¼	.07½
CALIFORNIA—						
38-40 water white Kero. (high-burning test)	.05½	.06	.05¾	.06½	.05¾	.06½
Engine distillate, 43-44, 445 endpoint	.08	.08¾	.08	.08¾	.08	.08¾
Engine distillate, 42-44, 480 endpoint	.07½	.08¼	.07½	.08¼	.07½	.08¼
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.05½	.05¾	.05½	.05¾	.05½	.06
42-44 water white kerosene	.06	.06⅛	.06	.06⅛	.06	.06¼
GULF COAST (Export)—						
41-43 prime white	.07		.07		.07	
41-43 water white	.08		.08		.08	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

	July 16		July 9		July 2	
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil, per bbl.	.45	.50	.45	.50	.45	.50
18-22 Fuel Oil, per bbl.	.50	.55	.50	.55	.52½	.55
20-22 Fuel Oil, per bbl.	.55	.60	.55	.60	.55	.60
22-26 Fuel Oil, per bbl.	.60	.65	.60	.60	.60	.65
24-26 Fuel Oil, per bbl.	.65	.70	.65	.70	.65	.70
26-30 Fuel Oil, per bbl.	.77½	.82½	.77½	.82½	.77½	.82½
28-30 Fuel Oil, per bbl. (industrial)	.80	.85	.85	.90	.85	.90
32-36 Gas Oil (industrial)	.02⅜	.02½	.02⅜	.02½	.02⅜	.02½
32-36 Gas Oil (straw color)	.02½	.02¾	.02½	.02¾	.02⅝	.02¾
36-38 Distillate	.03	.03⅛	.03	.03⅛	.03	.03⅛
38-40 Straw Distillate	.03¼	.03½	.03¼	.03½	.03¼	.03½
NORTH TEXAS—						
Below 20 Fuel Oil	.60	.65	.60	.65	.60	.65
24-26 Fuel Oil, per bbl.	.65	.70	.65	.70	.65	.70
32-36 Gas Oil (straw)	.02⅜	.02½	.02⅜	.02½	.02⅜	.02½
38-40 Straw Distillate	.03¼		.03¼		.03¼	
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.75		.70	.80	.70	.80
30-32 Gas Oil	.02¾	.03	.02¾	.03	.02¾	.03
***ARKANSAS—**						
33-36 Distillate	.03	.03¼	.03	.03¼	.03	.03¼
30-32 Gas Oil	.02¾	.03	.02¾	.03	.02¾	.03
16-22 Refinery Fuel Oil, per bbl.	.75		.70	.80	.70	.80
GULF COAST (South Texas)—						
Gas Oil	.04		.04		.04	
Bunker C Fuel (cargo lots), per bbl.	.70	.80	.70	.75	.80	.85
Bunker C Fuel (small lots)	.90	.95	.90	.95	.95	1.00
PENNSYLVANIA—						
30-34 Fuel Oil	.04⅛	.04⅜	.04⅛	.04⅜	.04½	.04¾
36-40 Fuel Oil	.04½	.04¾	.04½	.04¾	.04¾	.05
CALIFORNIA—						
33-36 Distillate	.04	.04½	.04	.04½	.04	.04½
26-32 Distillate	.03	.03½	.03	.03½	.03	.03½
15-20 Fuel Oil, Bunker (at tide water)	.65	.85	.65	.85	.65	.85
15-20 Fuel Oil (cargo lots), per bbl.	.70	.85	.70	.85	.70	.85
27 plus Diesel, per bbl.	.90	1.05	.90	1.05	.90	1.05
CHICAGO DISTRICT (Based on Group 3)—						
22-26 Fuel Oil, per bbl.	.62½	.67½	.62½	.67½	.60	.65
18-22 Fuel Oil, per bbl.	.47½	.52½	.47½	.52½	.45	.50
28-30 Fuel Oil	.90	.95	.90	.95	.87½	.95
32-36 Gas Oil (zero)	.02⅝	.02¾	.02⅝	.02¾	.02½	.02⅝
32-36 Gas Oil (industrial)	.02⅝	.02⅝	.02⅜	.02⅝	.02⅜	.02½
36-38 Distillate	.03¼	.03⅜	.03¼	.03⅜	.03¼	.03⅜
38-40 Straw Distillate	.03⅜	.03½	.03⅜	.03½	.03⅜	.03¾

*Louisiana, Arkansas, Mississippi, East Texas delivery.

LUBRICATING OIL AND WAX

	July 16		July 9		July 2	
OKLAHOMA (Group 3)						
100 vis., 2 color, 20-25 cold test	.06¾	.07	.06¾	.07	.06¾	.07
100 vis., 3 color, 20-25 cold test	.05¾	.06	.05¾	.06	.05¾	.06
150 vis., 3 color, 20-25 cold test	.07¾	.08	.07¾	.08	.07¾	.08
150 vis., 4 color, 20-25 cold test	.07¼	.07½	.07¼	.07½	.07¼	.07½
180 vis., 3 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
180 vis., 4 color, 23-28 cold test	.08¾	.09	.08¾	.09	.08¾	.09
180 vis., 5 color, 23-28 cold test	.08½	.08¾	.08½	.08¾	.08½	.08¾
200 vis., 3 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
200 vis., 4 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
200 vis., 5 color, 23-28 cold test	.08¾	.09	.08¾	.09	.08¾	.09
240 vis., 3 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 4 color, 25-30 cold test	.12¼	.12½	.12¼	.12½	.12¼	.12½
240 vis., 5 color, 25-30 cold test	.11¾	.12	.11¾	.12	.11¾	.12
280 vis., 3 color, 25-30 cold test	.15¾	.16	.15¾	.16	.15¾	.16
280 vis., 4 color, 25-30 cold test	.14¾	.15	.14¾	.15	.14¾	.15
280 vis., 5 color, 25-30 cold test	.13¾	.14	.13¾	.14	.13¾	.14
Cylinder Stocks:						
600, steam refined, light green	.14	.16	.14	.16	.14	.16
600, steam refined, dark green	.13	.14	.13	.14	.13	.14
190-200 vis., D color Bright Stock	.40		.40		.40	
150-160 vis., D color Bright Stock	.35	.36	.35	.36	.35	.36
150-160 vis., E color Bright Stock	.33		.33		.33	
Waxes:						
124-126 White Crude Scale Wax	.02½	.02⅝	.02½	.08⅝	.02½	
PENNSYLVANIA—						
34 Neutral	.07½	.07¾	.07½	.07¾	.07¾	.08
34 Sundebloom	.07¾	.08	.07¾	.08	.07¾	.08
36 Miners' Neutral	.07¼	.07½	.07¼	.07½	.07¾	.08
150, 3 color	.20	.20¼	.20	.20¼	.20½	.21
180, 3 color	.25	.25½	.25	.25½	.26	.26½
200, 3 color	.27½	.28	.27½	.28	.28	.28½
220, 3 color	.29½	.30	.29½	.30	.31	.31½
600, steam refined	.27½	.28	.28	.28½	.27	.28
635, steam refined	.31	.32	.31	.32	.29	.30
650, steam refined	.34	.35	.34	.35	.37	.37½
600, Pennsylvania Flash	.37	.38	.37	.38	.38	.39
630, Pennsylvania Flash	.40	.40½	.40	.40½	.40	.40½
600, E filtered	.34	.35	.34	.35	.35	.36
600, D filtered	.37	.38	.37	.38	.38	.39
Pennsylvania Bright Stock	.51	.52	.51	.52	.51	.52
*122-124 White Crude Scale Wax	.02¾	.02⅞	.02¾	.02⅞	.02⅞	.03
*124-126 White Crude Scale Wax	.02⅞	.03	.02⅞	.03	.03	.03⅛

*At New York.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.06½	.07	.06½	.07	.06½	.07
No. 3 color, 200 vis., pale oil	.09½	.10	.09½	.10	.09½	.10
No. 3 color, 300 vis., pale oil	.10½	.10¾	.10¼	.10¾	.10½	.10¾
No. 3½ color, 500 vis., pale oil	.11¾	.12¼	.11¾	.12¼	.11¾	.12¼
No. 4 color, 750 vis., pale oil	.13	.13½	.13	.13½	.13	.13½
No. 5 to 6 color, 200 vis., red oil	.08½	.08¾	.08½	.08¾	.08½	.08¾
No. 5 to 6 color, 300 vis., red oil	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼
No. 5 to 6 color, 500 vis., red oil	.10¾	.11½	.11¼	.11½	.11¼	.11½
No. 5 to 6 color, 750 vis., red oil	.12½	.13	.12½	.13	.12½	.13
No. 2½ color, 200 vis., pale filtered	.11	.12	.11	.12	.11	.12

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

No. 2½ color, 300 vis., pale filtered	.12	.13	.12	.13	.12	.13
No. 2½ color, 500 vis., pale filtered	.14½	.15	.14½	.15	.14½	.15
No. 2½-3 color, 750 vis., pale filtered	.17	.19	.17	.19	.17	.19
CALIFORNIA—						
130 vis., 2½-3 color	.10¼	.10½	.10¼	.10½	.10¼	.10½
200 vis., 2½-3 color	.11½	.11¾	.11½	.11¾	.11½	.11¾
300 vis., 3-3½ color	.13	.13½	.13	.13½	.13	.13½
350 vis., 3½-4 color	.13½	.13¾	.13½	.13¾	.13½	.13¾
400 vis., 3½-4 color	.15	.15½	.15	.15½	.15	.15½
Red Neutral:						
200 vis., 4½-5 color	.11	.11¼	.11	.11¼	.11	.11¼
300 vis., 5-6 color	.12	.12¼	.12	.12¼	.12	.12¼
400 vis., 5-6 color	.13¼	.14	.13¼	.14	.13¼	.14
500 vis., 4½-5 color	.14¼	.15½	.14¼	.15½	.14¼	.15½
500 vis., 5-6½ color	.15	.15¼	.15	.15¼	.15	.15¼
600 vis., 6½ plus color	.16	.16¼	.16	.16¼	.16	.16¼

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	July 16		July 9		July 2	
Gasoline, U. S. Motor, 58-60, 437	.10	.11	.11		.11	
Kerosene, water white, 41-43	.07¾	.08	.07¾	.08	.08	
*Fuel Oil, Bunker "C," 14-16, per bbl.	1.05		1.05		1.05	
†Fuel Oil, Diesel, 28-30, per bbl.	2.00		2.00		2.00	
Gas Oil, 32-36 gravity	.05¼		.05	.05½	.05	
25 pale Paraffin Oil	.10½		.10½		.10½	
28 pale Paraffin Oil	.07¼		.07¼		.07¼	
285 red Paraffin Oil	.11½		.11½		.11½	
250 red Paraffin Oil	.11		.11		.11	
225 red Paraffin Oil	.09½		.09½		.09½	
200 red Paraffin Oil	.09		.09		.09	
Refined Wax:						
120-122 a.m.p., per lb.	.03½		.03½		.03⅝	
125-127 a.m.p., per lb.	.04		.04		.04⅛	
130-132 a.m.p., per lb.	.05		.04¾		.04¾	
133-135 a.m.p., per lb.	.06		.06		.06⅛	
135-137 a.m.p., per lb.	.06⅜		.06⅜		.06½	
Petrolatum in barrels, carload lots, per pound:						
Dark green	.02		.02		.02	
Amber	.03½		.03½		.03½	
Extra amber	.03¾		.03¾		.03¾	
Cream	.06½		.06½		.06½	
Lily white	.07½		.07½		.07½	
Snow white	.08½		.08½		.08½	

*Lighterage 5.0 cents a barrel extra. †Lighterage 6.5 cents a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	July 16	July 9	July 2
Kerosene, prime white	.08	.08	.08
Kerosene, water white	.09	.09	.09
600, steam refined cylinder stocks, in bbls.	.36	.38	.42
635, steam refined	.38	.40	.44
650, steam refined	.43	.45	.49
600, Pennsylvania Flash	.48	.48	.52
630, Pennsylvania Flash	.52	.52	.57
600, Warren E	.43	.43	.44
600, Oil City E	.42	.42	.44
Light 140-150 Bright Stocks	.60	.60	.61
Dark 140-150 Bright Stocks	.59	.59	.60

LOS ANGELES EXPORT PRICES

	July 16		July 9		July 2	
Kerosene, water white	.05	.05½	.05	.05½	.05	.05½
U. S. Motor Gasoline, 53-55, 437 e.p.	.07	.07½	.07	.07½	.07	.07½

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Corsicana heavy (January 11)* ..... .80
Other fields .....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties—See gravity table.

WEST TEXAS

Iatan* .....Same as North Texas
Crane-Upton-Crockett, Pecos, Winkler, Mitchell, and Glasscock (See gravity table).
Chalk† ..... .65

*Includes Howard County and Westbrook Fields.
†Posted by Humble Oil & Refining Co.

ARKANSAS-NORTH LOUISIANA

Smackover, below 24 gravity (May 20, 1929) .....$ .85
Smackover, 24 gravity and above (May 20, 1929) 1.00
Cotton Valley (Below 36 gravity May 22) ..... .85
Bellevue (May 29, 1929) 1.30
Urania (May 21, 1929) 1.10
East El Dorado (May 22, 1929) ..... .85
Other fields .....See gravity table

Cotton Valley crude above 36 gravity takes same gravity price schedule as shown for North Louisiana and Arkansas crude in Mid-Continent gravity price table.

Note—Smackover, Cotton Valley and Bellevue posted by Standard Oil Co. of Louisiana, and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co.

GULF COAST

Grade A (May 20)* $1.30
Grade B .....See gravity table
Jennings, La. (March 14)† 1.05
Saratoga, Batson, Dayton (March 14, 1927)‡ 1.20
Markham (March 14)§ 1.00
High Island (December 14)¶ 1.00

*Humble Oil & Refining Co., The Texas Company, Gulf Pipe Line Co., and Sun Pipe Line Co. †Gulf Pipe Line Co. ‡Sun Pipe Line Co. §The Texas Company.
¶Posted by Gulf Pipe Line Co.

ROCKY MOUNTAIN STATES
Ohio Oil Co.-Midwest Refining Co.
(Effective May 21, 1929)

Rock Creek, Wyo. $1.40
Salt Creek .....See gravity table
Big Muddy 1.43
Grass Creek, heavy (July 27, 1928) ... .90
Grass Creek, light 1.65
Mule Creek 1.20
Elk Basin 1.65
Lance Creek 1.68
Poison Spider (March 14, 1927) 1.00
Notches (March 14, 1927) ..... .65
Rex Lake (February 22) 1.10
Osage 1.65
Lost Soldier (contract, May 22) 1.05
Hamilton Dome (March 14, 1927) ..... .85
Pedro 1.25
Greybull 1.65
Four Bear ..... .85
Cat Creek (Montana) (July 27, 1928).. 1.48
Sunburst (Montana) (May 23, 1929) ... 1.75
Torchlight 1.65
Hogback (New Mexico) 1.70

Note—Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

SOUTH CENTRAL AND SOUTH-WESTERN TEXAS

Luling (May 2)* .....$ .90
Mirando (May 20, 1929)† ..... .90
Salt Flat (May 20, 1929)§ 1.25

(Continued on Page 144)

CRUDE OIL GRAVITY TABLE

Gravity—	Okla., Kans. N. C. Tex. 1	No. La. and Arkansas 2	Crane, Upton, Crockett, Winkler, Howard, Pecos, Texas crudes, and Lea, N. Mex. 3	Stephens, Ark. 4	Wheeler (Texas Panhandle) 5	Gray County (Texas Panhandle) 6	Carson and Hutchinson (Texas Panhandle) 7	Salt Creek, Wyo. 8	Grade B & Light Crude (G. Coast) 9	Somerset (South Central Texas) 10
24 and above	....	....	....	....	....	....	....	....	....	....
Below 24	....	....	....	....	....	....	....	....	....	....
Below 25	.85	....	.70	....	....	....	....	....	1.15	....
25 to 25.9	.90	....	.74	....	....	....	....	....	1.18	....
26 to 26.9	.95	....	.78	....	....	....	....	....	1.21	....
27 to 27.9	1.00	....	.82	....	....	....	....	....	1.24	....
Below 28	....	1.00	....	.90	.90	.90	.90	....	....	....
28 to 28.9	1.05	1.05	.86	.94	.90	.90	.90	....	1.27	....
29 to 29.9	1.10	1.10	.90	.98	.90	.95	.90	1.10	1.30	....
30 to 30.9	1.15	1.15	.94	1.02	.95	1.00	.90	1.15	1.33	....
31 to 31.9	1.20	1.20	.98	1.06	1.00	1.05	.90	1.20	1.36	....
32 to 32.9	1.25	1.25	1.02	1.10	1.05	1.10	.95	1.25	1.39	1.05
33 to 33.9	1.30	1.30	1.06	....	1.10	1.15	1.00	1.30	1.42	1.07
34 to 34.9	1.35	1.35	1.10	....	1.15	1.20	1.05	1.35	1.45	1.09
35 to 35.9	1.40	1.40	1.14	....	1.20	1.25	1.10	1.40	1.48	1.11
36 to 36.9	1.45	1.45	1.18	....	1.25	1.30	1.15	1.45	....	1.13
37 to 37.9	1.50	1.50	....	....	1.30	1.35	1.20	1.50	....	1.16
38 to 38.9	1.55	1.55	....	....	1.35	1.40	1.25	....	....	1.17
39 to 39.9	1.60	1.60	....	....	1.40	1.45	1.30	....	....	....
40 to 40.9	1.65	1.65	....	....	1.45	1.50	1.35	....	....	....
41 to 41.9	1.70	1.70	....	....	1.50	1.55	1.40	....	....	....
42 to 42.9	1.75	1.75	....	....	1.55	1.60	1.45	....	....	....
43 to 43.9	1.80	1.80	....	....	1.60	1.65	1.50	....	....	....
44 and above	1.85	1.85	....	....	1.65	1.70	1.55	....	....	....

Column 1, Note—Magnolia Petroleum Co. posted schedule May 20, 1929, making price below 26 gravity 70 cents per barrel, 26-26.9 gravity 75 cents, 27-27.9 gravity 85 cents, 28-28.9 gravity 90 cents, 29-29.9 gravity 95 cents, 30-30.9 gravity $1.05, and 31-31.9 gravity $1.15, with balance of the price schedule as shown above.

Oklahoma—Carter Oil Co., Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., The Texas Company, May 20.

North Central Texas—Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Nocona and Moran, Prairie Oil & Gas Co., Sinclair Oil Refining Co., Humble Oil & Refining Co., The Texas Company and Gulf Refining Co., May 20.

Kansas—Prairie, Sinclair, The Texas Company and Carter, May 20.

Column 2—Arkansas and North Louisiana—[Caddo, Bull Bayou, Crichton, Cotton Valley, above 36 gravity, DeSoto, Haynesville, Homer and El Dorado only] May 22, Standard Oil Co. of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co., Magnolia Petroleum Co., schedule applies to Pine Island, Haynesville, Bull Bayou, Louisiana and El Dorado, Ark., light crude.

Column 3—Humble Oil & Refining Co. and Magnolia Petroleum Co., May 20.

Column 4—Atlantic Oil Producing Co., Prairie Oil & Gas Co., Louisiana Oil & Refining Corp., May 21, 1929.

Columns 5, 6 and 7—Humble Oil & Refining Co., Magnolia Petroleum Co., May 20, 1929.

Column 8—Midwest Refining Co., May 20, 1929. All crude over 37 gravity $1.50 per barrel.

Column 9—Humble Oil & Refining Co., May 20, 1929 (schedule ends 35 and above).

Column 10—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co.-Union Oil Co. (Effective January 18, 1929)

Gravity—	Salt Lake, Potrero, Newport, Long Beach, Summerland, Lawndale Richfield, Torrance, Olinda-Brea, Fullerton, Alamitos Heights, Signal Hill, Seal Beach, Huntington Beach, Athens, Inglewood, Rosecrans-Dominguez, Watsonville 1	Whittier, La Habra, Coyote Hills 2	Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills 3	Montebello 4	Santa Fe Springs 5	Santa Maria, Coalinga 6	Wheeler Ridge, Fruitvale 7	Orcutt Ventura, Rincon 8	Ventura Ave. 9	Elwood Terrace 10
14 to 14.9	.70	.70	.50	.70	....	.50	.50	.65	.70	....
15 to 15.9	.70	.70	.50	.70	....	.50	.50	.65	.70	....
16 to 16.9	.70	.70	.50	.70	....	.50	.50	.65	.70	....
17 to 17.9	.70	.70	.50	.70	....	.50	.50	.65	.70	....
18 to 18.9	.75	.75	.56	.70	....	.56	.56	.70	.75	....
19 to 19.9	.80	.80	.62	.75	....	.62	.62	.70	.80	....
20 to 20.9	.85	.84	.68	.80	....	.68	.68	.70	.85	....
21 to 21.9	.89	.88	.74	.85	.89	.74	.74	.86	.86	....
22 to 22.9	.93	.91	.80	.90	.92	.80	.80	.87	.87	....
23 to 23.9	.97	.94	.85	.95	.95	.85	.85	.90	.90	....
24 to 24.9	1.01	.97	.90	.98	.98	.88	.88	.94	.94	....
25 to 25.9	1.05	1.00	.95	1.01	1.01	.91	.91	.98	.98	....
26 to 26.9	1.09	1.04	1.00	1.04	1.04	.94	.94	1.02	1.02	....
27 to 27.9	1.13	1.08	1.05	1.07	1.07	.98	.97	....	1.06	....
28 to 28.9	1.17	1.12	1.10	1.10	1.10	1.02	....	....	1.10	....
29 to 29.9	1.21	1.16	1.16	1.13	1.15	1.06	....	....	1.14	....
30 to 30.9	1.25	1.20	1.22	1.16	1.20	1.10	....	....	1.18	....
31 to 31.9	1.30	....	1.28	....	1.25	1.14	....	....	1.22	....
32 to 32.9	1.35	....	1.34	....	1.30	1.18	....	....	1.28	....
33 to 33.9	1.41	....	1.40	....	1.35	1.22	....	....	1.34	....
34 to 34.9	1.47	....	1.46	....	1.40	1.26	....	....	1.40	1.16
35 to 35.9	1.53	....	....	....	1.45	1.30	....	....	1.46	1.22
36 to 36.9	1.59	....	....	....	1.50	....	....	....	1.52	1.28
37 to 37.9	1.65	....	....	....	1.55	....	....	....	1.58	1.34
38 to 38.9	1.71	....	....	....	1.60	....	....	....	1.64	1.40
39 to 39.9	1.77	....	....	....	1.65	....	....	....	1.70	1.46
40 to 40.9	1.83	....	....	....	....	....	....	....	1.76	1.52
41 to 41.9	1.89	....	....	....	....	....	....	....	1.82	1.58
42 to 42.9	1.95	....	....	....	....	....	....	....	1.88	1.64

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain 11 to 13.9 gravity 45 cents, 14 gravity and above 50 cents, effective October 2, 1929. On December 1, 1928, the Union Oil Co. posted Midway-Sunset, Elk Hills, Buena Vista, Lost Hills and Coalinga crude as follows: 11 to 13.9 gravity at 45 cents, 14 gravity and above 50 cents.

Column 1—Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 to 28.9 gravity, Dominguez and Athens-Rosecrans, 24 to 42.9 gravity.

Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 19.9 gravity; Midway-Sunset, Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravity posted at 45 cents.

Column 6—Oil below 14 gravity posted at 45 cents.

Columns 8 and 9 posted by Union Oil Co. only.

TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns July 16.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Chicago dist.†..	16.0	17.0	...	13.0
Decatur, Ill. ...	16.2	17.2	...	13.1
E. St. Louis ...	15.4	16.4	...	12.2
Joliet	16.4	17.4	...	13.3
Peoria	16.2	17.2	...	13.1
Quincy	16.2	17.2	...	12.9
Davenport, Ia..	19.5	20.5	3.0	13.3
Des Moines ..	19.5	20.5	3.0	13.3
Keokuk	19.5	20.5	3.0	13.3
Sioux City	19.1	20.1	3.0	12.9
Duluth, Minn..	20.5	21.5	3.0	13.9
Mankato	20.1	21.1	3.0	13.7
Minneapolis ...	20.2	21.2	3.0	13.9
LaCrosse, Wis..	19.2	20.2	2.0	14.0
Milwaukee	18.1	19.1	2.0	12.9
Madison	18.3	19.3	2.0	13.1
Detroit, Mich...	19.8	20.8	3.0	14.7
Grand Rapids..	19.7	20.7	3.0	14.6
Saginaw	19.9	20.9	3.0	14.8
Evansville, Ind.	20.0	21.0	4.0	14.0
Fort Wayne ..	20.4	21.4	4.0	14.4
Indianapolis ..	20.2	21.2	4.0	14.2
South Bend	20.4	21.4	4.0	14.4
Fargo, N. D...	21.9	22.9	3.0	15.9
Huron, S. D. ..	21.3	22.3	4.0	14.7
Sioux Falls ...	20.1	21.1	4.0	14.4
K. C., Mo.* ...	18.9	19.9	3.0	11.6
Springfield* ...	18.8	19.8	3.0	12.5
St. Louis*	17.9	18.9	2.5	12.3
St. Joseph	18.5	19.5	3.0	12.2
Wichita, Kans..	17.8	18.8	3.0	11.8
Bartlesville, Ok.	18.5	19.5	4.0	11.5

*State tax 2 cents; remainder city tax.
†Effective February 20, discounts on Q.D.A. in Chicago district 2 cents off service station price on purchases of 500 gallons or more per month and 4 cents on purchases of 1,000 gallons or more per month.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	15.7	12.9
V. M. & P. Naphtha	17.2	13.9
Cleaner's naphtha	17.0	14.9
Stanisol	18.0	15.4

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 799 gallons	8.0
800 gallons or more	7.5

Note—Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

The following quantity discounts from the service station price are allowed on monthly sales of gasoline; 2,000 gallons or less, 2 cents; more than 2,000 and less than 6,000 gallons, 2½ cents; more than 6,000 gallons, 3 cents. Discounts are allowed each month, and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discount on the previous month's purchases.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Dallas, Tex. ...	15.0	19.0	2.0	13.0
Fort Worth ...	15.0	18.0	2.0	12.0
Houston	15.0	19.0	2.0	13.0
San Antonio ..	15.0	19.0	2.0	11.0
El Paso	16.0	20.0	2.0	16.0
Texarkana	15.0	19.0	2.0	13.0
Muskogee, Ok.*	17 0	20.0	4.0	13.0
Okla. City* ...	17 0	20.0	4.0	10.0
Tulsa*	15.0	19.0	4.0	10.0
Ft. Smith, Ark.	16.0	20.0	4.0	12.0
Little Rock ..	20.0	24.0	5.0	13.0

*Gasoline tank wagon price to dealers 2 cents under posted tank wagon.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Denver, Colo...	18.0	21.0	4.0	15.5
Pueblo	18.0	21.0	4.0	15.5
Grand Junction	22.5	25.5	4.0	19.0
Casper, Wyo. ..	21.0	24.0	4.0	14.0
Cheyenne	22.0	25.0	4.0	15.5
Butte, Mont. ..	25.5	28.5	5.0	20.0
Helena	25.5	28.5	5.0	20.0
Salt Lake, Utah	22.0	25.0	3.5	17.0
Albu'que, N. M.	21.0	24.0	5.0	17.0
Boise, Idaho ..	24.5	27.5	4.0	19.0
Twin Falls	24.5	28.5	4.0	19.0

PENNSYLVANIA—DELAWARE AND PART NEW ENGLAND

The Atlantic Refining Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Pittsburgh, Pa.	17.0	*23.0	...	14.0
Philadelphia ..	17.0	*23.0	...	14.0
Scranton	17.0	*23.0	...	14.0
Allentown	17.0	*23.0	...	14.0
Altoona	17.0	*23.0	...	14.0
Erie	14.0	*19.0	...	14.0
Dover, Del.	20.0	22.0	3.0	14.0
Wilmington	20.0	22.0	3.0	14.0
Springf'd, Mass.	18.0	20.0	2.0	15.0
Worcester	17.0	18.0	2.0	15.0
Boston	18.0	20.0	2.0	15.0
Providence, R.I.	16.0	17.0	2.0	15.0
Hartford, Conn.	18.0	20.0	2.0	14.0
New Haven	18.0	20.0	2.0	15.0

*Includes tax of 4.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the state. The Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. The Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Albany, N. Y...	16.0	17.0	3.0	15.0
New York* ...	19.0	21.0	2.0	15.0
Buffalo	16.0	18.0	3.0	14.0
Rochester	16.0	18.0	3.0	14.0
Syracuse	16.0	18.0	3.0	15.0
Boston, Mass...	18.0	20.0	3.0	15.0
Augusta, Me...	20.0	22.0	4.0	15.0
Manch't'r, N.H.	20.0	22.0	4.0	15.0
Burlington, Vt..	19.0	20.0	4.0	15.0

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlanta, Ga. ...	20.0	22.0	4.0	16.5
Augusta	22.0	24.0	4.0	15.5
Macon	22.0	24.0	4.0	16.5
Savannah	21.0	23.0	4.0	15.5
Birm'ham, Ala.	22.0	24.0	4.0	16.0
Mobile	22.0	24.0	4.0	15.0
Montgomery	23.0	25.0	4.0	16.5
Clarks'le, Miss..	22.0	24.0	5.0	12.5
Jackson	22.0	24.0	5.0	13.0
Natchez	21.5	23.5	5.0	14.0
Gulfport	23.5	25.5	5.0	14.0
Vicksburg	21.5	23.5	5.0	14.0
Jack'ville, Fla..	23.0	25.0	6.0	14.5
Miami	24.0	26.0	6.0	15.5
Pensacola	24.0	26.0	6.0	14.5
Tampa	23.0	25.0	6.0	14.5
Lexington, Ky..	21.0	23.0	5.0	15.5
Covington	21.0	23.0	5.0	15.5
Louisville	21.0	23.0	5.0	15.0
Ashland	18.0	19.0	5.0	15.5
Catlettsburg ..	18.0	19.0	5.0	15.5

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. Pensacola and Mobile taxes include 1-cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

PACIFIC COAST TERRITORY

Standard Oil Co. (California)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
San Francisco.	20.0	24.0	3.0	15.5
Los Angeles ..	19.5	23.5	3.0	15.5
Reno, Nev. ..	24.0	26.0	4.0	19.0
Portland, Ore...	20.5	24.5	3.0	16.5
Seattle, Wash..	19.5	23.5	2.0	16.5
Tacoma	19.5	23.5	2.0	16.5
Spokane	23.5	27 5	2.0	20.5
Phoenix, Ariz..	18.0	22.0	4.0	20.5

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Omaha	20.25	22.25	4.0	13.25
McCook	21.75	23.75	4.0	14.75
Norfolk	20.75	22.75	4.0	13.75
N. Platte	21.75	23.75	4.0	14.50
Scottsbluff	21.75	23.75	4.0	14.25

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlantic City ..	14.0	18.0	2.0	13.0
Newark, N. J...	16.0	20.0	2.0	13.0
Annapolis, Md..	18.0	22.0	4.0	13.0
Baltimore	18.0	22.0	4.0	13.0
Cumberland ...	18.0	22.0	4.0	13.0
Washington ...	16.0	20.0	2.0	12.0
Danville, Va...	19.0	23.0	5.0	13.0
Norfolk	19.0	23.0	5.0	13.0
Petersburg	19.0	23.0	5.0	13.0
Roanoke	18.0	21.0	5.0	13.0
Richmond	19.0	23.0	5.0	13.0
Charles'n, W.Va.	18.0	22.0	4.0	13.0
Keyser	18.0	22.0	4.0	13.0
Parkersburg ...	16.0	20.0	4.0	13.0
Wheeling	18.0	22.0	4.0	13.0
Charlotte, N. C.	19.0	23.0	5.0	13.0
Hickory	19.0	23.0	5.0	13.0
Mt. Airy	19.0	23.0	5.0	13.0
Salisbury	19.0	23.0	5.0	13.0
Charleston, S.C.	20.0	24.0	6.0	13.0
Columbia	20.0	24.0	6.0	13.0

OHIO

Standard Oil Co. (Ohio)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Ohio points* ..	20.0	21.0	4.0	†14.0

*Dealers and commercial accounts 2 cents under tank wagon.
†Service station price 16 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
N. Orleans, La.*	18.5	22.5	5.0	16.0
Baton Rouge ..	17.0	21.0	4.0	14.5
Alexandria	18.0	22.0	4.0	16.0
Lafayette†	19.0	23.0	5.0	14.0
Lake Charles†.	19.5	23.5	5.0	16.0
Shreveport	18.5	22.5	4.0	15.0
Knoxv'le, Tenn..	20.0	24.0	5.0	16.0
Memphis	18.0	22.0	5.0	12.5
Chattanooga ..	21.5	25.5	5.0	16.0
Nashville	19.0	23.0	5.0	16.0
Bristol	22.0	25.0	5.0	14.0
Lit. Rock, Ark..	20.0	24.0	5.0	13.0

*Tax of 5 cents includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax and 1-cent parish tax.
†Includes 1-cent parish tax.

TANK WAGON CHANGES

July 1—Standard Oil Co. of Kentucky advanced the gasoline tank wagon and station prices 1 cent in Florida to equalize the advance in the state tax from 5 cents to 6 cents.

July 4—Standard Oil Co. of Kentucky reduced the gasoline tank wagon and station prices 2 cents in Atlanta, Ga., to 20 cents and 22 cents.

CRUDE PRICE CHANGES

July 16—Joseph Seep Purchasing Agency reduced all Pennsylvania grade crude oil 25 cents per barrel except that in Buckeye Pipe Lines which was cut 35 cents.

GULF COAST MARKET AFFECTED BY TANKERS

HOUSTON, Tex., July 16.—No relief from the tight tanker situation at Gulf Coast ports was indicated the past week. Tankers Tuesday were practically unobtainable for general movements and rates were held at the high figure of 40 cents reached during the preceding week. This situation, however, has failed to force coastal sellers into further lowering of fuel quotations due to the inability to move fuel in cargoes at any price. Although with the advance in tanker rates of the preceding week fuel for coastwise movement weakened off from 5 to 10 cents a barrel it found no better demand with the result that sellers now are holding a nominal market at 75 to 80 cents pending easing up of tankers which now are chiefly in California service.

This situation also has failed to affect the local bunkering which can be held to 95 cents to $1. Increased shipping in other lines at all Gulf Coast ports is causing a good demand for bunkering oil which would not be helped by weakening of prices. Although fuel oil stocks are increasing steadily, there apparently is no attempt of competition in prices as the market is fairly well lined up. The market on pale and red oils continues unchanged with virtually all sellers making increased efforts to prevent any slump during July. With an excellent volume of business during May and June refiners this month are in fair condition so far as stocks are concerned.

FIRE DESTROYS BARGE

MUSKEGON, Mich., July 13.—Fire started by lightning completely destroyed the barge "Altamaha" of Buffalo and her partial cargo of about 6,000 bbls. of Dundee crude oil in the Muskegon Harbor today. Lightning struck the vessel at 9 a.m. and before noon there was little left but a small pool of floating crude oil fed by oil escaping from the sunken hull.

Michael Burke, 23-year-old deck hand, was internally injured but four other men aboard jumped to safety without injury. Burke was lying in his bunk when the bolt struck the ship and it exploded. The "Altamaha," a wooden hull oil barge, was owned by C. H. Orrison of Buffalo.

CRUDE OIL PRICES

(Continued from Page 143)

Rockdale-Minerva (April 15):	
Below 28 gravity	1.26
28-38.9 gravity	1.27
39-39.9 gravity	1.29
40 and above	1.31
Thrall‡	...
Callihan (May 15)	1.75
Lytton Springs (Lockhart)	See gravity table
Somerset	See gravity table

*Posted by Magnolia Petroleum Co.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.
‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight.
§Humble Oil & Refining Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective July 16, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$3.80
Bradford District Oil in National Transit Lines (Pennsylvania)	3.80
Penna Grade Oil in National Transit Lines (Pennsylvania)	3.80
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	3.75
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.65
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.50
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 22, 1929)	1.75
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Line (May 22, 1929).	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s Lines (May 22, 1929)	1.90
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) (May 22, 1929) ...	1.80
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Jan. 29) ...	.60

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective May 21, 1929)

Lima	$1.80
Wooster	1.90
Illinois	1.75
Indiana	1.57
Princeton	1.75
Plymouth	1.38
Waterloo (November 17, 1926)	1.35
Western Kentucky	1.88
Dundee, Mich. (June 26, 1929)‖	1.25
Upper and Lower Traverse sands, Mich.‖	
.....Same as Mid-Continent gravity scale	
Midland, Mich. (June 3, 1929)*	1.70
Saginaw, Mich., Saginaw Sand (February 10)†	1.89
Saginaw, Mich., Berea Sand (February 10)†	1.79
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky, (March 15)‡	1.50
Oil in line in Stoll Oil Refining Co. in Oil City, Ky. (June 1, 1929)§	1.80
Oil Springs (Canada)¶	2.27
Petrolia (Canada)¶	2.20

*Posted by Pure Oil Co.
†Posted by Sun Oil Co.
‡Posted by Paragon Development Co.
§Posted by Stoll Oil Refining Co.
¶Posted by Imperial Oil Co., Ltd.
‖Posted by Standard of Indiana for boat shipment.

MEXICAN CRUDE

Panuco (May)*	$ .60

*Average of sales for May.

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Amerada, Dixie in Lease Agreement

Partners in 490,000 Acres in Oklahoma and Kansas. Judge Beaty Formally Elected Chairman of Transcontinental

The Amerada corporation announced on Monday that an agreement was signed on Saturday, July 13, for the sale to the Standard Oil Co. of Indiana through its subsidiary, the Dixie Oil Co., of an undivided half interest in that part of the Oklahoma and Kansas leasehold of the Amerada Petroleum Corp. on which production has not yet been developed. A half interest in some 490,000 net acres is being sold for $10,000,000 of which $5,000,000 is to be paid in cash, and an additional $5,000,000 is to be paid free of all cost to Amerada out of one-half of Dixie's interest in oil produced from the properties.

None of the productive leasehold of Amerada is involved in this transaction.

The properties involved in the deal will be developed jointly by the Amerada and the Dixie companies, which will share equally in the production obtained, after the $5,000,000 in oil has been paid to the Amerada corporation.

After the sale of this leasehold, amounting to approximately 20 per cent of its nonproductive acreage, the Amerada still retains some 930,000 net acres in the States of Oklahoma, Kansas, Texas, Louisiana, Arkansas, New Mexico, California and Mississippi, as well as interest in some 700,000 acres in Venezuela.

Continuing, the statement says: "The Amerada has no bank loans or funded indebtedness and with the receipt of the $5,000,000 cash consideration, will have about $7,500,000 in cash, and current assets will exceed current liabilities by about $11,500,000, equivalent to more than $12 per share on the outstanding stock.

"This strong financial position will enable Amerada to intensify its campaign of further development and expansion. The community of interest with the Dixie in the extensive joint holdings in Oklahoma and Kansas will no doubt, upon consummation of the transaction, result in a development program that will greatly strengthen the production situation of both companies in the Mid-Continent Field."

The Amerada Petroleum Corp. has a production of between 15,000 and 16,000 bbls. daily, at this time. On the acreage that the Dixie Oil Co. purchased 16 drilling operations are under way and a small amount of production on some of the leases.

A half interest in the 490,000 acres which was sold to the Dixie Oil Co. means an average of $20 an acre for the 245,000 acres and the balance is to be taken from the oil runs.

Drilling & Exploration Co.

Drilling & Exploration Co., Inc., has been organized under the laws of the State of Delaware, for the purpose of undertaking, through contracts, the management and execution of operations having to do exclusively with the exploration for oil. The scope of the company's business comprises three lines of activity, contract drilling, geophysical and geological surveys and investigations, and the commercial exploitation of certain devices (upon which patent applications have been made) developed as aids to more efficient drilling. The board of directors follow: J. E. Brantley, president; W. M. Chadbourne, F. W. Copeland, vice president, Sullivan Machinery Co.; E. B. Hopkins, consulting geologist and petroleum engineer; John M. Lovejoy, president, Petroleum Bond & Share Cor.; Burton McCollum, physicist, formerly with United States Bureau of Standards; C. R. Rider, vice president; H. J. Wasson, vice president, consulting geologist; W. E. Wrather, consulting geologist.

The management will be under the direct supervision of J. E. Brantley and C. R. Rider, and an executive committee composed of J. E. Brantley, E. B. Hopkins and J. M. Lovejoy. Mr. Brantley was chief foreign geologist for Atlantic Refining Co. from January, 1922, to November, 1928. Mr. Rider has been associated with Mr. Brantley for several years.

Transcontinental Oil

Amos L. Beaty of New York was elected chairman of the board of directors of the Transcontinental Oil Co. at a special meeting of stockholders held in Tulsa on July 12.

At the same meeting the stockholders ratified a plan for the readjustment of the company's financial structure. It is proposed that the holders of 3,758,699 shares of no par common stock of the company receive the right to subscribe for one additional share of common stock for each two shares held July 23. Under the plan these rights will expire on August 19, immediately following which the entire plan of the company will be completed, and soon afterwards the new board of directors will assume office.

Amos L. Beaty, the new chairman of the board, was for years chairman of the board of directors of The Texas Company and had been connected with that company from 1907 until his resignation in December, 1927. Judge Beaty is an eminent lawyer, a banker and knows the oil business from every angle. He is treasurer of the American Petroleum Institute.

General Asphalt

General Asphalt Co. is reported negotiating with the Johns-Manville Corp. for the disposal of its roofing business. General Asphalt stockholders at the last annual meeting amended the company's charter to provide for the sale of this business. General Asphalt is now receiving and selling 5,000 bbl. of royalty oil daily on its Venezuelan properties, and it is believed that by the end of 1929 the company will be an out and out oil company.

Shell American Shares

Recently declared dividends of 3s per ordinary share of Shell Transport & Trading Co., Ltd., is equivalent to $1.44 7-10 on each American share. Dividend is payable by Equitable Trust Co. of New York, the depository, on July 23, to stock of record July 16.

Tide Water Oil

Tide Water Oil Co. declared the regular quarterly dividend of $1.25 on the preferred, payable August 15 to stock of record July 22.

Union Oil of California

Union Oil Co. of California declared regular quarterly dividend of 50 cents payable August 10 to stock of record July 18. Preliminary statement of Union Oil for six months ended June 30, 1929, estimates net income at $7,000,000, after interest, depreciation, depletion and federal taxes, equivalent to $1.72 a share (par $25) earned on 4,060,000 shares of stock. This compares with $5,800,000 or $1.53 a share on 3,791,924 shares in first six months of 1928.

"Larger profits are accounted for principally by increased production of refining crude and expansion of gasoline cargo business at better prices," W. L. Stewart, president, stated.

"Due to intensive development generally at Santa Fe Springs drilling in that area increased so that charges to income for labor and incidental costs of new drilling were about $1,800,000 more than for like period of 1928.

"Production, subject to royalties, of crude oil and natural gasoline by the company for the six months approximated 10,200,000 bbls., an increase of 3,200,000 bbls. over the same period last year. Sales for six months amounted to $43,000,000, an increase in value of $2,900,000 over the same period last year. The quantity sold approximated 18,900,000 bbls. in 1929, an increase of 3,400,000 bbls. Gasoline cargo shipments reflected a volume increase of 55 per cent over the six months of 1928."

Sinclair Consolidated Oil

Sinclair Consolidated Oil Corp. declared the regular quarterly dividend of $2 on the 8 per cent preferred, payable August 15 to stock of record August 1.

Vacuum Oil

Before his departure for abroad, George P Whaley, president of Vacuum Oil Co., said:

"The record of Vacuum Oil Co. has been one of steady and continued progress; earnings have consistently shown an increase in each succeeding year, and I do not expect anything to the contrary this year. Prospects for the company are extremely encouraging and we should do a very satisfactory business in 1929."

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Saturday, was as follows:

Feb. 16	55.35	May 4	59.13
Feb. 23	54.92	May 11	59.75
March 2	56.43	May 18	59.30
March 9	55.96	May 25	57.73
March 16	58.63	June 1	56.45
March 23	58.52	June 8	58.37
March 30	58.57	June 14	57.76
April 6	58.26	June 21	56.76
April 13	58.52	June 28	56.70
April 20	58.46	July 5	56.52
April 27	58.34	July 12	55.69

INDEPENDENT OILS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Kennedy Building, Tulsa, Okla.

1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low	Par value	Stocks	For week ended July 13: Sales	Open	High	Low	Last
$6.75	.45	2 7/8	.55	1 1/4	.53	$5	Amer. Con. Oilfields	6,900	1/2	1/2	3/8	3/8
..	..	7 1/2	2 3/4	9 1/2	3 1/2	N.P.	Amer. Maracaibo	700	3 7/8	4	3 7/8	3 7/8
..	..	2 3/4	1	4 1/2	2 1/4	$10	Argo Oil	300	2	2 1/8	2	2 1/8
85 1/4	60	40	20 1/2	55	32 3/4	N.P.	British American	100	50	50	50	50
28 5/8	9 1/4	28 1/4	15 1/2	4 1/2	3 7/8	25c	Carib. Syndicate (new)	3,100	4 1/2	4 1/2	4	4
..	..	58 3/4	40 1/4	90 7/8	54	$20	Cities Service	No sales.				
..	..	95 3/8	87	103 1/2	94 1/2	100	Cities Service, pfd.	No sales.				
..	..	8 7/8	7 3/8	9 5/8	8 7/8	10	Cities Service, pfd. B	No sales.				
3 1/2	1 3/4	3 7/8	1 1/8	3 1/4	76	1	Colombia Syndicate	2,000	7/8	1	3/4	3/4
..	..	9 3/4	6 3/8	8 7/8	6 1/4	10	Consolidated Royal	400	6 3/4	6 1/2	6 1/2	6 1/2
16	10	14 7/8	9 1/2	17 1/2	9 1/2	N.P.	Creole Syndicate	7,500	8 1/4	8 3/8	8	8 1/8
..	..	3	.50	3 1/4	.76	N.P.	Crown Central	1,400	1 1/2	1 1/2	1 1/4	1 3/8
7 7/8	6 3/4	12	4	33 1/2	3 1/4	N.P.	Darby Petroleum	3,700	15 1/2	16 3/4	14 1/4	15
..	..	2 1/2	74	2 1/4	1	N.P.	Derby Oil & Refining	7,000	10 3/4	10 7/8	9 1/4	9 1/4
..	..	16 3/4	4	21 1/8	7 1/2	N.P.	Derby Oil & Refining, pfd.	No sales.				
..	..	2	.40	.53	.15	N.P.	Gilliland ctfs.	No sales.				
98	92	118	86 1/4	165	101 1/8	$25	Gulf Oil Corp.	46,500	177	202 7/8	175 1/8	196
$3.00	.83	2 1/2	.80	3 3/8	1	5	Intercontinental Pet.	3,400	1 3/8	1 3/8	1 1/4	1 1/4
..	..	2 1/4	1 1/8	3	1 1/4	N.P.	Kirby Petroleum	1,200	1 5/8	1 7/8	1 5/8	1 3/4
12 1/4	5 3/4	10 7/8	5 1/2	9 3/8	5 1/2	25	Leonard Oil & Dev.	14,600	3 3/4	4 3/4	3 3/4	4 3/4
27	20	27 1/2	20	43 7/8	20	N.P.	Lion Oil & Refining Co.	600	34 7/8	35	33	35
46	30	59 3/8	37	69 1/8	48 1/2	$25	Lone Star Gas	400	81	85	81	85
2 7/8	1	2 7/8	.80	1 7/8	.50	1	Magdalena Syndicate	500	7/8	1/2	3/8	1/2
34	12 1/2	52	12	48 1/2	32	N.P.	Margay Oil	No sales.				
8	5 1/2	12 1/2	5	8	2 3/4	N.P.	Mexico-Ohio Oil	100	2 3/4	2 3/4	2 3/4	2 3/4
1 3/4	1 1/8	1 1/2	1	1 3/4	.76	$1	Mountain & Gulf	200	7/8	7/8	7/8	7/8
26	23	29 1/4	22 3/4	28 1/8	19 1/2	10	Mountain Producers	3,900	15	15	12	12 1/4
6 5/8	5	5 7/8	4 5/8	5 5/8	4 1/4	5	New Bradford	700	3 5/8	3 5/8	3 3/8	3 3/8
..	..	16	9 1/4	11 7/8	7 1/8	1	New Mex. & Ariz.	400	5 3/4	6	5 5/8	6
..	..	12 3/4	9 1/2	14 1/4	8 1/2	N.P.	North Central Texas	1,800	11 1/4	11 1/2	11	11 1/2
10 1/2	5 7/8	9 3/8	3 1/4	6	2 1/8	N.P.	Pandem	2,000	1 5/8	1 3/4	1 3/8	1 1/2
12 1/4	11 3/4	12 1/2	7	15 5/8	8 1/2	N.P.	Pantepec Oil	2,000	6	6 3/8	6	6 3/8
22 3/4	12	13 1/2	5 1/8	7 3/4	4 7/8	N.P.	Pennok Oil	No sales.				
17	8 1/2	24 3/8	7	18	4 7/8	25	Red Bank Oil	No sales.				
30 1/4	12	15 1/2	3 1/2	12 7/8	4 1/2	N.P.	Reiter-Foster	6,900	4 7/8	7 3/8	4 7/8	5 7/8
7	4 1/2	7	4 1/2	12	4 1/2	N.P.	Ryan Consolidated	No sales.				
10	7 1/8	8	5 1/4	7 1/4	5 1/2	$10	Salt Creek Cons.	1,000	22 7/8	23	22 7/8	23
35	24 1/2	35 1/2	27 1/4	35	23 1/8	10	Salt Creek Prod.	5,300	18 1/4	19	15	16
6 7/8	1 1/4	7	1 1/4	3 1/2	1	5	Savoy Oil	200	1 1/8	1 1/8	1 1/8	1 1/8
92	63 1/2	92	63 1/2	93 1/4	75	100	Transcontinental, pfd.	400	..	142 1/2	137	142 1/2
8	4 1/2	7 3/8	4 1/4	9 1/2	4 3/4	5	Venezuelan Petrol	4,900	3 7/8	4	3 5/8	3 5/8
8 1/2	5 1/2	8	4 3/4	8 1/4	4 7/8	$1	Woodley Petroleum	400	4 1/4	4 3/8	4 1/4	4 3/8
6 1/2	6	6	1 3/4	8 3/8	2 1/8	25	Y Oil & Gas (new)	100	1 5/8	1 5/8	1 5/8	1 5/8

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of New York Stock Exchange, Kennedy Building, Tulsa, Okla.

1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low	Listed capital	Par value	Stocks—	Div. rate	Last paid	For week ended July 13 Sales	Open	High	Low	Last	Change
32⅞	24¼	37⅝	27⅝	43⅞	27⅛ (sh)	922,075	N.P.	Amerada Corp.	50cQ	Oct. 31, 28	25,400	32	33	31½	32⅜	+ ⅜
74	39⅞	82½	35⅛	85	51⅛ (sh)	209,180	N.P.	American Republics Corp.	.....	.....	2,300	45⅛	46	45	45	— ⅛
60	44⅜	50¼	35	53⅜	37½	$57,260,300	$25	Associated Oil	50cQ	Dec. 31, 28	2,400	44	44½	44	44½	+ ½
128⅜	97	131¾	104	66⅜	50	50,000,000	25	Atlantic Refining	25cQ	Dec. 15, 28	384,700	75	77⅞	68¼	68⅞	— 8½
33½	23½	35½	20¾	53	20	35,194,000	25	Barnsdall Corp.	50cQ	Feb. 5, 29	39,600	41½	41⅝	40	40	— 2
94½	50	96⅜	65	94⅞	68	20,785,400	100	General Asphalt	.....	.....	21,800	86⅝	86⅝	82⅞	86⅝	+ 2⅛
72	50¼	175¾	60⅛	167	79	25,000,000	100	Houston Oil	.....	.....	4,400	83½	82½	76½	78	+ 4⅞
34	19⅝	32¾	17⅝	38⅜	21¾ (sh)	959,457	N.P.	Independent Oil & Gas	50cQ	Jan. 31, 29	15,300	34¼	34⅞	34¼	34⅞	.....
12¾	7½	12⅞	7⅝	39⅝	9	8,203,080	$10	Indian Refining	.....	May 31, 24	31,500	45	45¼	42⅛	42⅜	— 1
25⅞	16½	37¾	20½	39⅛	27⅜ (sh)	3,992,122	N.P.	Lago Oil & Transport	.....	May 1, 27	3,100	33⅞	35½	32½	34¼	+ ⅝
19⅞	12	18⅛	10	19¾	9⅜ (sh)	1,237,078	N.P.	Louisiana Oil Refining	.....	.....	4,300	12⅝	12¾	12⅛	12⅛	— ½
28	16½	22¾	12	25½	12½ (sh)	330,000	N.P.	Maracaibo Oil	.....	.....	100	13⅜	13⅜	13⅜	13⅜	— 1
63⅜	49¼	58½	31	49¾	33 (sh)	2,316,692	N.P.	Marland Oil Co.	.....	Mar. 31, 27	37,300	49¼	50	45½	46	— 4
13¾	6	9¼	3	73	4⅝ (sh)	945,939	N.P.	Mexican Seaboard	.....	Dec. 15, 20	11,900	33⅝	33⅞	33¼	33½	— ⅛
37	20½	39⅜	25½	44½	25⅛ (sh)	1,357,461	N.P.	Mid-Continent Petroleum	50cQ	Feb. 15, 29	No sales.					
104¼	90	105	97	120½	103¼	$6,718,000	$100	Mid-Continent Petroleum pfd.	$1.75Q	Sept. 1, 28	4,300	4	4	3½	3½	— ¼
2½	½	3¾	1⅝	7⅜	2⅝	24,298,850	10	Middle States	.....	July 1, 23	1,700	55	57	54	56⅜	+ 1⅝
76½	56⅛	65⅞	40⅛	54⅞	38¼	$48,807,400	$50	Pan American P. & T.	.....	Oct. 20, 27	49,300	57¼	61¼	56¼	60¼	+ 3
78⅜	56⅞	66⅜	40¼	58⅞	37¾	121,097,900	50	Pan American P. & T. B.	.....	Nov. 15, 24	190	14	14⅛	14	14	.....
46	30	37⅞	16¾	28⅝	15½ (sh)	400,000	N.P.	Pan American Western B.	.....	Jan. 30, 27	11,000	9¾	9¾	9½	9½	— ⅛
32	4½	18⅞	8	21⅜	11½ (sh)	198,770	N.P.	Panhandle P. & R.	.....	.....	No sales.					
99¾	51	83	54	108	70	$2,935,200	$100	Panhandle P. & R. pfd.	.....	July 2, 23	8,600	37⅝	38⅞	36⅜	36¾	— 1¼
57⅝	40	60¼	36¼	53⅞	35¼ (sh)	2,406,796	N.P.	Phillips Petroleum	37½cQ	Jan. 2, 29	3,600	2	2⅛	2	2⅛	+ ⅛
....	....	1⅛	½	5¼	½	$29,622,925	$25	Pierce Oil Corp.	.....	.....	1,900	4¼	4⅜	4⅛	4½	.....
7	2¼	5½	2½	7	3½ (sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	12,500	55⅛	55⅜	54	54⅛	— 1
60¼	48	55½	45⅝	68	46	60,000,000	25	Prairie Oil & Gas	.....	Aug. 31, 27	13,600	60	61⅛	59½	60½	+ ¾
137½	122½	190	130¾	280	172	$101,250,000	$25	Prairie Pipe	75cQ*	Mar. 31, 29	2,700	18	18	17	17	— 1¼
20¾	11	33⅞	16¾	29⅞	16	$37,450,850	$50	Producers & Refiners	.....	Sept. 15, 23	4,000	42	42⅝	40⅜	40½	— 1½
41¾	30¾	50	36⅞	49⅝	41	2,845,350	50	Producers & Refiners pfd.	.....	May 1, 25	16,900	27⅛	27⅜	26¼	26⅝	— ⅜
31	25¼	33½	25	31⅝	19	75,959,350	25	Pure Oil Co.	25cQ	Dec. 1, 28	7,200	41¾	42⅜	40⅝	41½	— ⅝
27½	22	28⅝	25⅜	56	23	47,025,000	$25	Richfield Oil	.....	Nov. 15, 28	5,100	54⅛	56¼	52⅝	53	— ¼
57⅜	47⅜	54½	44¼	64	44⅝ (sh)	611,303	13.40	Royal Dutch, N. Y. shares	50cQ	Jan. 10, 29	No sales.					
48⅝	40½	47⅞	41⅜	57½	40⅝ (sh)	£30,000,000	£1	Shell Transport & T.	$1.45	July 23, 28	11,400	26⅝	27	26½	26½	— ½
31	24	31¾	24⅝	39¼	23¼ (sh)	20,000,000	N.P.	Shell Union Oil	35cQ	Dec. 31, 28	125,000	32	37⅞	31½	31½	— 1
25⅝	15⅛	26⅜	14¼	27¼	18⅛	$8,357,000	$10	Simms Petroleum	10cQ	Dec. 15, 28	86,900	37	41⅜	32¾	35½	— 1⅝
24⅞	16¾	22⅜	15	46¾	17⅜ (sh)	4,501,915	N.P.	Sinclair Consolidated	.....	.....	300	109⅛	109⅛	109⅛	109½	+ ⅛
99½	90	104½	97	110	102½	$16,604,600	$100	Sinclair Consolidated pfd.	$2Q	Nov. 15, 28	13,600	42⅝	43⅜	40½	40¾	— 1⅞
37⅛	26⅝	37⅜	24⅛	42⅝	25	27,396,590	25	Skelly Oil Co.	50cQ	Dec. 15, 28	36,800	73⅛	74	72	73¼	— 1½
63⅝	51½	60¾	50⅜	80	53 (sh)	12,594,098	N.P.	Standard Oil of California	65½Q	Dec. 15, 28	36,900	57¼	58⅜	56⅞	57⅛	— ⅝
46⅜	37½	41⅜	35⅛	59⅜	37¾	$611,120,700	$25	Standard Oil of New Jersey	25cQ*	Dec. 15, 28	40,500	39¾	39¾	38	39	— ⅜
47¼	30⅜	34⅛	29¾	44¼	28¾	427,973,275	25	Standard Oil of New York	40cQ	Dec. 15, 28	11,400	73½	76⅜	72	72	— 2½
41¾	30⅛	34⅞	30	77	31½ (sh)	1,206,073	N.P.	Sun Oil	25cQ	Dec. 15, 28	300	7¾	8½	7½	7⅝	— ¼
5¼	1	6½	3⅛	14¼	2½ (sh)	1,267,000	N.P.	Superior Oil Corp.	.....	Dec. 20, 20	34,600	62⅛	63⅜	61⅝	62⅛	— ¾
58	48	58	45	74¾	50	$211,076,650	$25	The Texas Corporation	75cQ	Jan. 1, 29	6,600	17⅝	17¾	17	17¼	— ⅛
19½	12	18⅞	12	26⅝	12⅛	8,380,340	10	Texas Pacific Coal & Oil	.....	Jan. 3, 28	800	34⅛	34⅜	33½	33½	— ⅝
39¼	27	29⅛	19	41½	19⅝ (sh)	2,168,410	N.P.	Tide Water Oil Co.	20cQ	Dec. 15, 28	500	92⅞	92⅞	91	92	— 1
103	87¼	90½	85	100⅛	86	$20,705,200	$100	Tide Water Oil Co. 5% pfd.	65½cQ	Dec. 15, 28	26,300	19¾	20⅜	19⅜	19⅝	.....
27	20⅞	19⅛	15⅜	25	14⅜ (sh)	4,796,158	N.P.	Tide Water Associated	.....	Aug. 1, 27	78,500	11⅜	12⅛	11¼	11⅞	+ ⅝
5½	3	10⅜	3¾	14¾	7¼ (sh)	3,742,029	N.P.	Transcontinental Oil	.....	.....	5,300	47⅝	48½	47¼	47½	.....
58⅜	37¼	56½	39⅝	58	42¾	$94,798,100	$25	Union Oil of California	50cQ	Nov. 10, 28	600	149	152	148	152	+ ¼
120⅜	84¼	127½	94	128⅛	110	31,061,200	100	Union Tank Car Co.	$1.25Q	Dec. 1, 28	6,200	33½	34½	31½	32	— ¾
30⅛	23½	34½	24½	44⅞	26 (sh)	356,000	N.P.	Warner Quinlan	50cQ	Jan. 2, 29	5,000	33½	34½	33¼	33½	— ⅛
29¾	25⅛	27½	20	38	20⅛ (sh)	490,000	N.P.	White Eagle Oil & Refining	50cQ	Jan. 20, 29	1,100	46⅛	48¾	45	48¾	+ 1¾
								Wilcox Oil & Gas	.....	.....						

*Also extras. †Ex-dividend.

STANDARD OIL STOCKS ON NEW YORK CURB

21	16	21⅝	17⅞	22⅜	14⅞	£4,126,460	£1	Anglo-American Oil	.....	June 6, 28	1,500	15	15⅛	14¾	15⅛	
....	....	3¾	¾	5	1¼ (sh)	500,000	N.P.	Atlantic Lobos	.....	.....	400	1⅝	2⅜	1¼	1¼	
76	65	69	50	56½	44½	1,000,000	25	Borne Scrymser	$1S.A.	Oct. 15, 28	200	36	36	35	35	
59½	42	60	45	76	53	10,000,000	50	Buckeye Pipe Line	$1Q	Dec. 15, 28	500	69¼	69½	69	69	
82½	65	126	76½	161	117	3,000,000	25½	Chesebrough Mfg.	$1Q	Dec. 28, 28	2,100	170	193¾	170	180	
25⅞	17½	22⅝	16¼	23	16	36,057,840	10	Continental Oil	.....	Dec. 15, 27	6,990	21¼	21¼	20⅛	20½	
137	102	137	89	114	67	1,500,000	50	Cumberland Pipe Line	$1A	Dec. 15, 28	No sales.					
63¾	43	68½	47	88	64⅛	5,000,000	100	Eureka Pipe Line	$1Q	Nov. 1, 28	100	38	38	38	38	
32½	9⅞	13½	3½	13	4¼	16,000,000	100	Galena Signal Oil	.....	June 30, 25	No sales.					
68½	52	68½	54	114¾	59¼	73,117,577	25	Humble Oil & Refining	30cQ*	Jan. 1, 29	13,580	121⅜	126⅞	121⅛	125⅞	
144½	125½	182	123¾	290½	176½	20,000	100	Illinois Pipe Line	10%S.A.	Dec. 15, 28	250	306	309	306	309	
....	....	64¾	37¾	104	56¾ (sh)	6,458,267	N.P.	Imperial of Canada	25cQ	Dec. 1, 28	36,600	28	30⅜	28	29¾	
72½	58	94½	61	91⅞	74⅜	$5,000,000	$50	Indiana Pipe Line	$1Q	Feb. 15, 29	100	104	104	104	104	
35½	28¾	39	28¼	55	35 (sh)	7,123,444	N.P.	International Petroleum	25c	Nov. 30, 28	8,300	26¼	26½	24½	25	
20¾	12½	24	13½	32⅜	19⅜	$6,363,350	12.50	National Transit Co.	25c	Dec. 15, 28	900	23½	23½	23	23	
51½	27¼	44½	31¼	75	38½	5,000,000	100	New York Transit	.....	July 15, 26	300	14½	15⅝	14½	15	
80½	64	100	70	69	56½	2,000,000	50	Northern Pipe Line	$3S.A.	Jan. 2, 29	50	58¾	58¾	58¾	58¾	
67¾	55⅝	67⅞	52	84	58½	60,000,000	25	Ohio Oil Co.	50cQ*	Dec. 15, 28	900	71⅜	72⅝	71⅜	71⅞	
24¾	15	39	12	84	28	10,000,000	25	Penn Mex. Fuel	$1.25	Dec. 15, 28	5,400	27½	40	37¼	38	
220	84½	201½	175½	220	167	4,000,000	100	Solar Refining	$5S.A.	Dec. 20, 28	200	37¾	39⅜	37¾	39⅜	
74½	61½	27¼	15½	19	15	1,000,000	10	Southern Pipe Line	$2	Dec. 1, 27	100	21	21	21	21	
50	34½	41½	35	71⅞	36¾	2,000,000	25	South Penn Oil	50cQ	Dec. 31, 28	1,500	53	53¼	53	53	
56	47½	83	55½	102	70	3,500,000	100	Southwest Pa. Pipe Lines	$1Q	Oct. 1, 28	86	..	65¾	55⅝	65¾	
70½	60½	81½	64⅝	95⅞	70⅞	228,415,463	25	Standard Oil of Indiana	61½Q	Dec. 15, 28	8,950	57	58	55⅝	56⅛	
36½	16½	20⅞	14⅝	37⅜	15	8,000,000	25	Standard Oil of Kansas	.....	June 16, 24	500	21½	21½	20⅛	20⅛	
134⅜	108	130	111½	179¾	122¼	17,012,559	10	Standard Oil of Kentucky	$1Q	Dec. 31, 28	3,300	38⅝	38⅝	33¾	37⅛	
51⅛	42	49½	40	54⅞	39⅞	4,559,850	25	Standard Oil of Nebraska	63cQ	Dec. 20, 28	300	47⅛	47⅛	47	47	
372	288	87½	72	134	71	14,000,000	25	Standard Oil of Ohio	62½cQ	Jan. 2, 29	350	119¼	121	119	121	
21	15	21	14½	23½	16	861,000	25	Swan Finch Co.	.....	Nov. 1, 19	No sales.					
109⅜	90¼	....	....	111	72	125,619,000	25	Vacuum Oil	75cQ	Dec. 20, 28	2,500	116	119⅝	116	119½	

*Also extras.

NO NEW DRILLING IN IRAQ

Drilling operations in Iraq by Turkish Petroleum Co. are going forward, but no placements of any petroleum products in either the local or foreign markets have been made, Consul John Randolph, stationed at Bagdad, reported to the Department of Commerce. Khanaqin Oil Co. is continuing its policy of developing the Iraq market without attempting exportation. It is reported that the company will not drill new wells. Statements by the company in the last few months of 1928 show no new drilling by the organization.

SURVEY OF BRADFORD FIELD

Charles R. Fettke, professor of geology at the Carnegie Institute of Technology, Pittsburgh, Pa., is in Bradford, Pa., engaged in the field work of state geological survey of the Bradford oil fields. Professor Fettke is assisted by W. A. Copeland, assistant professor of geology at Carnegie, and by W. Seifert, a member of the senior class. It is expected that the field work of the survey will be completed about the middle of September. Several months more must elapse, however, for computing and tabulating the final data.

GASOLINE PLANTS AT OKLAHOMA CITY

(Continued from Page 37)

Oil Co. and the Foster Petroleum Corp. It is operated under the name of the latter company of which H. V. Foster of Bartlesville, Okla., is president. Mr. Foster is also president of the Indian Territory company.

The plant was designed to take care of the gas available from the discovery well of the field with provision made for further expansion as conditions in the field justify additional capacity. The well which has been producing since November of last year is owned by the Indian Territory company. Its production at present is approximately 2,000 bbls. of crude oil daily.

The plant at present is operated as a combination gas lift and gasoline plant. A back pressure of about 75 pounds is maintained at the well and this furnishes a pressure of 50 pounds at the plant for the operation of the oil absorption unit. The plant at this time is handling 4,500,000 cubic feet of gas daily from which 3,000 gallons of Grade AA natural gasoline are obtained. Approximately 1,800,000 cubic feet of the gas is recycle gas which is returned to the well in the gas lift operation. A recent test of gas at 50 pounds pressure showed a gasoline content of .798 gallon per 1,000 cubic feet.

After passing through scrubbers the gas from the well passes directly to the oil absorber. The absorption and distillation equipment were manufactured by the Tulsa Boiler and Machinery Co. The absorption and distillation operation is conventional.

The residue gas from the steam still which is used in the gas lift operation is returned to the well at a pressure of 300 pounds. The remaining gas is used for field fuel. The compressor equipment at present consists of three 180-horsepower double stage Clark units. Gas from the low-stage compressors is cooled in Griscom-Russell coolers and any condensate is removed from the system in accumulator tanks. Gas from the high-stage compressors also passes through accumulator tanks before being returned to the well at the high pressure.

Plant Flexible

The plant was designed not only to provide for further expansion as it is now operated but also to adapt itself to practically any form of gas lift or gasoline plant operation. Should the well pressure decline so that there is not sufficient pressure to operate the absorption unit the low-stage compressors can be used to secure the necessary gas pressure. The high stage could then be used to furnish a smaller quantity of gas for well operation. The compressors are so equipped that all compressor capacity could be used exclusively at the plant which would then be the conventional oil absorption plant found in fields where the gas lift and gasoline plant operation is not combined. In this method of operation the gas lift at a relatively low pressure is boosted back to the wells where separate gas lift units are used in securing the pressure necessary for well operation. Should several wells be completed near the present plant this method of operation may be adopted by the Indian Territory company.

The plant site has been laid out so that the engine and compressor building can be enlarged to provide for additional units. Similar expansion is provided for in the cooling, pumping and control equipment.

The plant is now being enlarged by the installation of an additional absorber and cooling tower.

UTILIZATION OF WASTE NATURAL GAS PRODUCT

(Continued from Page 39)

ficient if the residue gases from the plants could be used, but so far such is not the case, partly due to the process generally used. Eighty-four per cent of the carbon black is manufactured by the channel process—which simply stated, consists in burning the gas with an insufficient amount of air for complete combustion and impinging the smoky flame produced upon a cold iron plate or channel. This process produces the best grade of carbon black.

Another process—known as the Thermatomic—passes a burning mixture of air and gas over a brick checkerwork until it reaches a very high temperature, then the air supply is shut off and the gas passing through the hot checkerwork breaks down to carbon and hydrogen. The black produced by this process is of inferior quality to channel black, but finds use in the rubber industry, while the by-product hydrogen also has industrial importance.

Recently specifications were drawn for a process that is claimed to be capable of yielding 13 per cent carbon black, or more than double the usual yield, and one plant is in operation in this country that is getting as high as ten pounds of black per 1,000 cubic feet.

Thus there are improvements under way, and it seems probable that still more will come, possibly by development of the thermal decomposition process, as a good grade of carbon black can be made in the laboratory by this method, and the mechanical difficulties in applying this process commercially will doubtless be solved.

This sketch of the carbon black industry indicates one outlet for an economical use of dry gas—the production of carbon black of high grade and with high recovery coupled with the production of cheap by-product hydrogen, which is becoming more and more important because of the increase in the synthesis of organic intermediates.

Water Gas

Within the past few years water gas, composed largely of CO and H_2, has become of great importance. The success of the methanol or wood alcohol synthesis is well known, while in Germany motor fuel under the name of "Synthol" is on the market. This is a mixture of hydrocarbons and oxygenated compounds made from water gas by the use of a catalyst. Even solid hydrocarbons, such as waxes, can be made by this process.

Water gas is usually made by the interaction of white hot coke and steam, the steam being passed over the glowing coals, but equal volumes of CH_4 and H_2O will react at high temperatures to give one volume of CO and three of H_2.

This process will produce a raw material from which methanol or hydrocarbon fuels could be synthesized. At the current quotation on methanol of about 55 cents to 60 cents per gallon this process would seem to have possibilities in localities where abundant water is present for the conversion of natural gas to water gas by steam. The production cost of fuel from water gas is not competitive, at present, but it would become so if a serious shortage of petroleum developed.

The synthesis of ammonia from H_2 and N_2 is now a commercial process and if it seemed desirable the H_2 in the water gas may be utilized for the production of ammonia. Here again, with the market price of ammonia at 14 cents per pound, there is a possible opportunity for a profitable industry to be established.

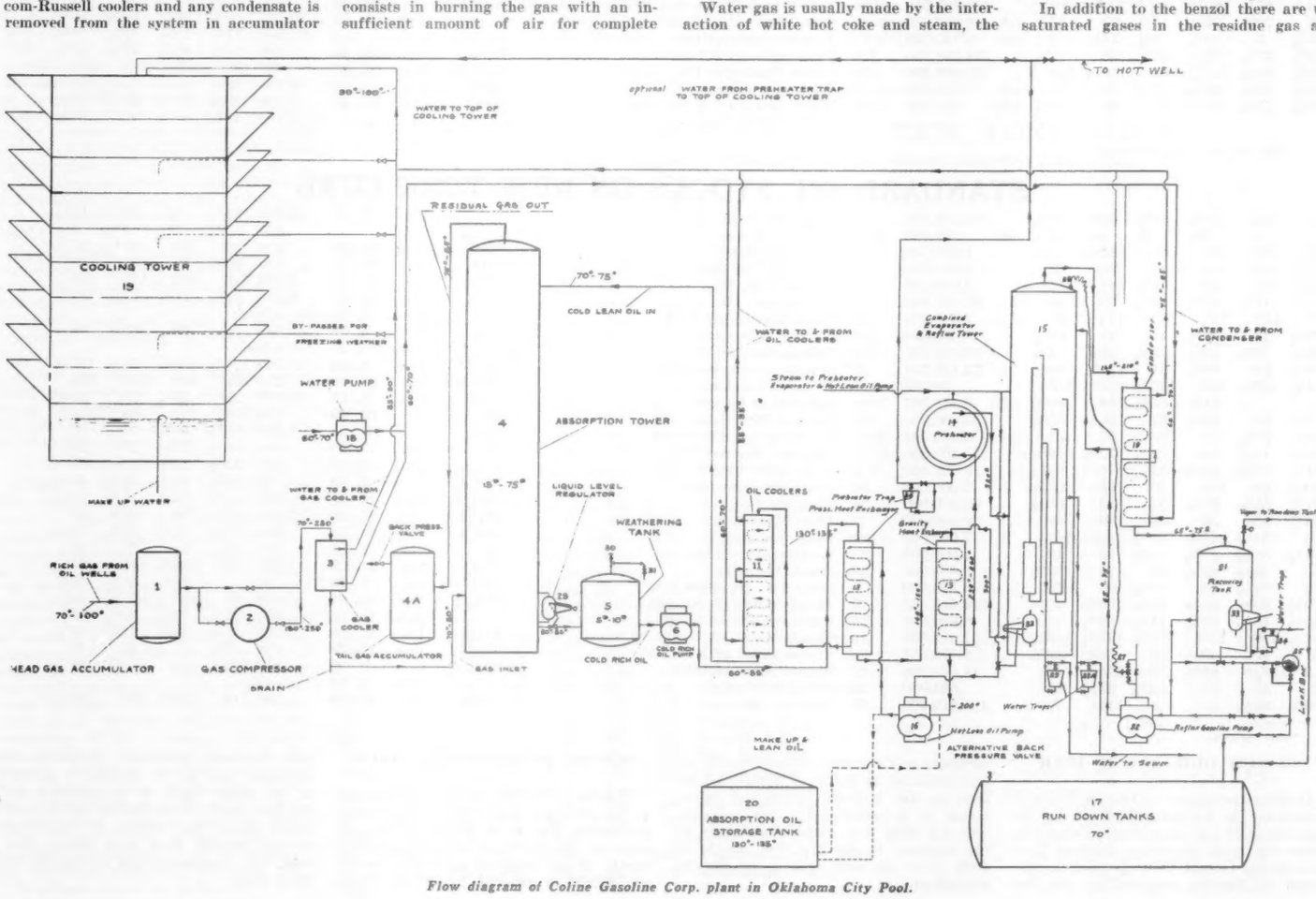
Incidentally, plants put in for the production of water gas from natural gas could be changed over to use coke and thus supply the needs of the community with manufactured gas at some future time when the supply of natural gas became inadequate.

This discussion indicates that there are three possibilities in the utilization of natural gas—the production of wood alcohol, ammonia, or automotive fuel by synthesis from water gas derived from steam and natural gas.

Direct Conversion of Natural Gas to Antiknock Fuels

Recently there has been much interest shown in the direct conversion of methane and higher hydrocarbon gases to benzol by means of heat. The process has been briefly described in the opening paragraphs of this article, and the work has been carried forward far enough at the laboratory of the Bureau at Bartlesville to indicate that the process is already almost as efficient as the present carbon black production methods and conceivably may be much improved.

In addition to the benzol there are unsaturated gases in the residue gas and



Flow diagram of Coline Gasoline Corp. plant in Oklahoma City Pool.

judging by the success of the Carbide & Carbon Corp. in treating gases from cracking stills these could be utilized in the production of such compounds as ethylene glycol, the successor to water for the cooling of airplane motors. Finally, after the benzol and unsaturated gases are removed there is still left a fuel gas of 600-900 B.t.u. values.

As recent as one year ago there was no published report mentioning the production of benzol from methane, although there were many patents, and today there are at least three articles on the same subject from as many different sources, as follows:

Brennstoff Chemie, Vol. 9, 1928, by Franz Fisher,

Fuel in Science and Practice, Vol. 7, 535-9, 1928, by Wheeler and Wood,

Journal Soc. Chem. Industry, January 11, page 17, 1929, by Stanley and Nash.

One of the newer processes recently patented proposed to pass methane through an electric arc and cause a reaction by which a large amount of acetylene gas will be formed.

In this description of the work of breaking down gas by heat, it has been considered as a dry gas made up principally of CH_4, and at the temperatures employed, from 1,800 to 2,200 degrees Fahrenheit, the other gases would break down to CH_4 and H_2 and unsaturated gases such as ethylene, or propylene. If the dry gas consists largely of ethane or propane larger yields of benzol are possible up to about 7 to 10 per cent. This pyrolysis, or process of decomposition by the action of heat, of natural gas is a third type of possible reaction for its economic utilization.

Oxidation and Chlorination

The disagreeable odor produced when gas heaters are not burning properly is due to the formation of formaldehyde, which is the result of incomplete oxidation of the gas. The production of formaldehyde, formic acid and methanol on a commercial scale, taking advantage of this reaction, is described in the following quotation from an article that appeared in the newspapers of this country last fall:

"Formaldehyde and methanol are the starting points in the production of synthetic resins and plastics found in radio sets, automobiles, countless molded materials and in many forms of art. Methanol is used in great quantities in many chemical industries and in the manufacture of dye stuffs, paint and varnish. With alternations in the designs of internal combustion engines, methanol may become important as a motor fuel," it is stated.

One of the chief outcomes of the process will be its application to gases to be obtained in the oil fields of the southwestern part of this country.

It is now considered that natural gas is virtually thrown away. If this gas is combined with ordinary air in the presence of a catalyst formaldehyde, formic acid and methanol can be produced. This new method may become a serious competitor of the German method of synthetically producing methanol or wood alcohol from hydrogen and carbon monoxide, and should be applicable here on account of the large volumes of natural gas available in the oil fields of this country.

Chlorination

The conversion of methane to such products as carbon tetrachloride and methyl tetrachloride has many interesting possibilities, not only in the direct use of these compounds as such, but also through their use in various organic reactions. Methane chlorinates readily giving in general four products, methyl chloride, methylene dichloride, chloroform and carbon tetrachloride. These are all produced simultaneously and the yield of any one product is determined by the reaction conditions.

At present methyl chloride is the only one of the four manufactured commercially, and this is used as a refrigerant and in the dyestuff industry. The commercial development of the other chlorinated products is largely a matter of economics. The process is known but the demand is not sufficient to make it profitable.

This is a fourth economic possibility for natural gas—its conversion to organic intermediates for use in the production of synthetic resins, refrigerants, dyestuffs, etc.

Miscellaneous Reaction

One of the most interesting reactions that natural gas undergoes is the production of unsaturated liquid products, some as heavy as lubricating oils, by the action of electrical discharge or corona on natural gases. This work has been done by Doctor Lind and may be the forerunner of important developments.

Other possibilities are the formation of metalic carbides by interaction of gas and metals at high temperatures and subsequent treatment of the carbide with water or acid to produce hydrocarbons. Acetylene is an example of the manner in which this method would work, although calcium carbide is not commercially made in that manner.

The reactions of methane under high pressure have been very little studied and it is very possible that many interesting reactions will be found under such conditions.

From this review of the possibilities of the utilization of gases that are now considered waste products of the petroleum industry it will be seen that there is still much to be done but as these processes are made commercially practical other industries and arts will be prepared to use the synthetically made products and in this way the income of the petroleum industry will be enhanced, and its scope of activities broadened.

F. M. KELLEHER DYING

Fred M. Kelleher, Wichita Falls, Tex., oil man, was reported late Tuesday to be in a dying condition. Mr. Kelleher was taken to a Wichita Falls hospital in a serious condition some time ago and his illness grew more serious until all hope of recovery was abandoned.

MISSISSIPPI IS NOW ATTRACTING ATTENTION

(Continued from Page 42)

shovel nature with very little chance for subdivision. Effort has been made for years to separate these clays and sands into two divisions, the upper being the Eutaw and the lower the Tuscaloosa. From what is showing on the outcrops no division could be had in any drilling done to the southwest where they are deeply buried. Unless its nature has been greatly changed away from the outcrops, one should figure that all of the upper Cretaceous section beneath the Selma is a thick body of mixed clays, sands and some lignite.

No lower Cretaceous is showing on the outcrops in Northeast Mississippi, but the absence of these beds may be due to an overlap and they might be found in any drilling to the southwest.

Comparisons Difficult

From this discussion, one can see how very difficult it would be to compare wells widely distributed over the north half of the State, say at Meridian, Jackson and Charleston. The Amory district is entirely different from the rest of the State, being within a limited area of Paleozoic where but a few counties can hope to find this same production.

Some of the blocks have been under lease for years and have been drilled or have shut down wells on them which have reached varying depths. They have a total acreage of approximately 900,500 acres, most of which is on straight commercial leases of 3, 5 and 10 years bought at prices ranging from 10 cents an acre several years ago on up. More recently landowners are demanding higher prices and some sort of guarantee that the block will be drilled by a definite date.

Because they are the most recent and thorough wells drilled and are representative of conditions in their localities, logs of Phillips Brothers' No. 1 James, Section 20-11-5, Yalobusha County, Arkansas Natural Gas Corp.'s No. 1 Rye, Section 22-15-17, Monroe County (Amory district); and Lion Oil Refining Co.'s No. 1 Misterfeldt, Section 2-4n-1e, Rankin County (Jackson district) have been selected. The Yalobusha County well, as this is written, is reported running sand tester at around 2,675 feet where it is claimed it had a good gas show. The Arkansas Natural Gas Corp. has fished out all lost casing in the Rye well and is arranging to reset 5-3/16-inch.

Log of Arkansas Natural Gas Corp.'s No. 1 Rye, Section 22-15-17, Monroe County, Mississippi.

Casing record: 12½-inch at 362 feet; 10-inch at 621 feet; 8¼-inch at 2,437 feet.

50 gumbo.
90 water sand.
108 gumbo and gravel.
148 water sand.
178 gumbo.
205 water sand.
240 sand and gravel.
265 gumbo and gravel.
320 water sand.
356 red gumbo and gravel.
405 rock.
406 red and gray gumbo and gravel.
467 sand and gravel.
565 red gumbo and streaks of gravel.
580 gumbo and gravel.
605 gray lime, rock streaks, hard gray shale.
652 white lime rock.
1,141 sandy slate.
1,154 shell.
1,155 streaks of sand, shale.
1,165 hard sandy slate.
1,185 hard sand.
1,193 dark slate, very little sand.
1,204 dark slate.
1,261 dark sandy slate.
1,294 hard coarse sand.
1,308 sand, very little slate.
1,328 sandy slate and shale.
1,486 broken sand and slate.
1,508 slate.
1,564 sandy shale.
1,627 sand.
1,645 fine hard sand carrying little salt water.
1,651 hard sharp sand.
1,665 broken sand.
1,727 sandy slate.
1,735 sand.
1,745 sandy slate.
1,777 sandy slate and shell.
1,793 shale.
1,813 sandy slate and shale.
1,838 slate.
1,888 sand.
1,895 slate.
1,920 sand.
2,020 slate.
2,112 hard sand.
2,122 slate.
2,133 slate and shell.
2,192 sand and sandstone.
2,305 hard gray sand.
2,362 gray sand and lime.
2,387 hard gray sand.
2,408 sandy shale.
2,422 sandy slate and shale.
2,432 sandy slate, show gas.
2,447 sandy slate.
2,532 hard sand.
2,590 salt water sand.
2,603 hard limy sand.
2,612 sand.
2,622 sandy lime.
2,631 dark slate.
2,692 gas sand.
2,715 sand.
2,724 gummy shale.
2,728 slate.
2,732 sandy lime.
2,747 water sand.
2,790 slate and shale.
2,796 sandy shale.
2,815 dark shale.
2,820 sandy shale.
2,828 dark shale.
2,841 shale.
2,843 sandy shale.
2,860 broken sand.
2,870 sandy shale.
2,904 sandy lime and shale.
2,928 sandy lime.
2,939 water sand.
2,973 hard sand.
3,000 hard gray sand.
3,010 sandy lime.
3,032 shaly lime and sand.
3,041 sandy lime.
3,072 black lime.
3,112 gray sand.
3,123 sand.
3,135 dark sand.
3,142 sandy shale.
3,163 hard sand.
3,289 dark lime.
3,322 lime.
3,360 shale.
3,375 sand showing gas; now fishing for 5 3-16-in. csg.

Log of Philp Brothers' No. 1 James, Section 20-11-5, Yalobusha County, Mississippi. Elev. 266 ft.

0 sandy clay.
30 water sand.
100 packed sand.
235 white gumbo.
300 green sand and lignite.
560 blue shale.
645 black waxy shale; cored out of Wilcox into Midway.
680 black gummy shale.
979 pyrites.
980 black gumbo.
1,006 rock.
1,007 black gumbo.
1,089 hard sandy shale.
1,104 gumbo.
1,125 rock.
1,126 black sticky shale.
1,205 rock.
1,206 shale.
1,210 rock.
1,211 black shale.
1,290 tough gumbo; top of Cretaceous formation; cored and analyzed by Mississippi Geological Survey; found same checking 166 feet high. All elevations and distances figured between No. 1 Bardwell, 6 miles northeast of Charleston, Tallahatchie County.
1,342 Arkdelphia chalk.
1,506 Nacatoch sand, cored and analyzed by Mississippi Geological Survey.
1,570 brown sandy shale.
1,620 tough gumbo.
1,648 sand; gas show.
1,666 Selma chalk.
1,683 Selma chalk.
1,720 very sticky chalk.
1,730 chalk rock.
1,984 shale, or cap rock.
1,985 fine green sand, cored very soft.
1,995 packed green sand; small gas show.
2,000 soft green sand.
2,010 hard packed sand.
2,015 sandy shale, paraffin.
2,030 tough gumbo.
2,055 shale.
2,085 sticky shale.
2,100 sticky shale.
2,145 gummy chalk.
2,160 gumbo.
2,180 chalk.
2,220 green shale.
2,230 tough gray gumbo.
2,250 cored green sand.
2,275 gumbo.
2,285 sticky shale.
2,305 shale.
2,307 lime rock.
2,309 soft gray sand.
2,311 soft sandy lime.
2,315 hard sandy lime; gas show.
2,330 broken lime.
2,335 dark sandy shale.
2,345 broken lime.
2,350 sandy gray shale.
2,370 gray gumbo.
2,390 hard sand.
2,405 hard and soft sand.
2,430 hard sand.
2,450 gumbo.
2,455 brown and grayish sand, 4 feet of oil sand, 2,476-80 feet.

Lion Oil Refining Co.'s No. 1 Misterfeldt, Section 2-4n-1e, Rankin County, Mississippi.

0 clay.
150 sand.
245 gummy shale.
261 gummy green shale.
275 gumbo.
320 shale.
370 gummy shale.
570 packed sand.
645 sandy shale.
693 gumbo.
700 water sand.
730 tough gumbo.
760 shale.
761 rock.
790 gumbo.
1,080 packed sand.
1,190 water sand.
1,210 shale and gumbo.
1,211 soft limy rock.
1,260 packed sand.
1,300 gummy shale.
1,310 gummy lime.
1,352 gumbo.
1,380 gummy lime and sand.
1,390 gumbo.
1,392 hard sand.
1,400 sandy shale.
1,420 gumbo.
1,440 shale.
1,450 gummy lime.
1,460 hard shale.
1,468 gumbo.
1,495 hard sandy shale.
1,510 broken lime.
1,535 lime.
1,541 lime and shale.
1,573 lime rock.
1,580 lime and shale.
1,607 gumbo.
1,628 water sand.
1,655 gumbo.
1,656 rock.
1,660 sandy shale.
1,675 gumbo.
1,730 sandy shale and lime.
1,750 packed sand.
1,770 sandy shale.
1,795 lignite.
1,835 gummy shale.
1,840 gumbo.
1,842 blue lime rock.
1,868 sandy shale and lime.
1,874 sandy shale.
1,880 gumbo.
1,895 gumbo.
1,945 shale and boulders.
1,965 gummy shale.
1,990 gumbo.
1,992 rock.
2,020 gumbo.
2,060 sand, shale and lignite.
2,071 sandy shale.
2,073 hard sandy rock.
2,090 sandy shale.
2,092 gumbo.
2,096 shale and lignite.
2,115 sand.
2,130 gumbo.
2,158 sandy shale and lime.
2,158.6 rock (6 inches).
2,164 sand and shale.
2,170 sandy shale.
2,210 gumbo.
2,245 shale and boulders.
2,250 sand and shale.
2,260 sandy shale.
2,283 gummy shale.
2,300 hard sandy shale.
2,320 gumbo.
2,328 shale and boulders.
2,330 rock.
2,338 gumbo.
2,400 gummy shale.
2,415 gumbo.
2,416 rock.
2,426 hard sand.
2,430 hard sand rock.
2,445 hard sand.
2,450 gumbo.
2,468 hard sand, shells, shale.
2,475 sandy shale.
2,490 gummy shale.
2,500 sandy shale.
2,525 gumbo.
2,560 sandy shale.
2,571 water sand.
2,580 hard packed sand.
2,593 lime.
2,706 packed sand.
2,710 hard rock.
2,722 sand.
2,740 shale.
2,750 sandy shale, lignite.
2,755 shale and gumbo.
2,769 shale and gumbo.
2,796 gummy shale.
2,802 sandy shale.
2,810 gummy shale.
2,822 gumbo.
2,831 gummy lime.
2,842 hard packed sand.
2,865 gummy shale.
2,874 sand.
2,891 hard sand.
2,892 hard lime rock.
2,896 hard rock.
2,918 sand.
2,938 sandy shale.
2,954 gumbo.
2,955 rock.
2,969 sandy shale.
2,990 sandy shale.
2,991 rock.
2,996 sandy shale.
3,039 shale and boulders.
3,064 shale.
3,065 rock; cored.
3,069 lime and sand; cored.
3,089 lime.
3,213 chalk.
3,251 lime.
3,460 chalk; cored 3,420-40 feet; 3,445-49 feet; and 3,449-53 feet.
3,480 chalk and lime.
3,502 lime; cored 3,480-91.
3,509 red beds.
3,512 red shale.
3,513 red beds; cored 3,512-15.
3,514 white sand.
3,515 sand and shale.
3,519 water sand; cored.
3,528 salt water sand.
3,541 red beds.
3,544 red shale.
3,551 water sand; cored.
3,567 red beds.
3,570 sandy lime; cored.
3,592 red beds; cored 3,573.
3,599 water sand; cored.
3,627 red beds.
3,628 sandy shale.
3,770 red beds.
3,775 salt water sand; cored.
3,787 red beds.
3,792 hard sand; cored.
3,803 gummy lime; cored 3,795.
3,827 sandy shale.
3,830 hard sand; cored.
3,833 gummy shale; cored.
3,842 gumbo.
3,843 hard rock; cored.
3,850 gummy shale; cored 3,846.
3,860 sandy shale and lime.
3,882 hard sandy lime.
3,896 gummy shale with lime streaks.
3,911 shale and lime breaks.
3,913 hard lime; cored.
3,926 shale and lime breaks.
3,938 shale.
3,948 sand and lime.
3,954 sandy lime.
3,963 shale and lime.
3,971 sandy lime.
3,992 broken lime.
4,010 red beds.
4,025 red beds.
4,032 hard red shale.
4,034 salt water sand.
4,042 water sand.
4,050 salt water sand.
4,060 red beds.
4,069 red beds.
4,075 salt water sand; cored and abandoned at 4,075.

PANHANDLE FIELDS

(Continued from Page 78)

Shaw Oil Co.'s No. 6 Waggoner had an initial production of 236 bbls. at 1,851-76 feet. Tulsa Oil Co.'s No. 1 Waggoner was dry and abandoned at 2,268 feet. Wichison Oil Corp.'s No. 1 Waggoner was dry and abandoned at 1,883 feet.

RANGER COMPLETIONS

Brown County

M. T. Anderson's No. 5 Leatherwood was dry and abandoned at 1,407 feet. Humble Oil & Refining Co.'s No. 1 Armstrong was shot with 10 quarts at 1,204-20 feet, drilled to a total depth of 1,223 feet and had an initial production of 55 bbls. G. P. Mitcham's No. 2 Keeler was dry and abandoned at 1,534 feet. Owens, Inc., and others' No. 1 Cannon was shot with 40 quarts at 1,138-42 feet and was drilled to a total depth of 1,144½ feet and had an initial production of 25 bbls. Ven-Mex Oil Co.'s No. 5 Hickman made 120 bbls. at 1,177-99 feet. McClung & Hickey's No. 1 Stagg had an initial production of 300,000 feet of gas at 1,450-75 feet and was drilled to a total depth of 1,700 feet. Mattocks and others' No. 1 Sanderson was dry and abandoned at 1,535 feet.

Coleman County

Barbree & Ross' No. 1 Farmer was dry and abandoned at 3,004 feet. Eastland Oil Co.'s No. 2-A Keeney had an initial production of 1,100 bbls. of oil and 14,000,000 feet of gas at 1,964-87 feet. Its No. 3-A Keeney had an initial production of 24,505,000 feet of gas at 1,966-99 feet. Midwest Exploration Co.'s No. 2 Keeney had an initial production of 12,800,000 feet of gas and 87 bbls. of oil at 2,000-28 feet. Simpson-White & Pinkerton's No. 1 Boyle was dry and abandoned at 952 feet. S. J. Taylor's No. 2 Young Brothers was dry and abandoned at 2,375 feet. Tidal Oil Co.'s No. 1 Flippen was dry and abandoned at 2,110 feet. Continental Oil Co. and others' No. 12 Overall had an initial production of 40 bbls. at 2,147-54 feet. Green and Mid-Sun Oil Corp.'s No. 1 Johnson was dry and abandoned at 1,034 feet. T. M. Weathered's No. 1 Dalton was dry and abandoned at 770 feet.

Callahan County

Bradstreet & Holden's No. 2-A Cavenough was shot with 30 quarts at 1,645-87 feet, was drilled to a total depth of 1,690 feet and had an initial production of 30 bbls.

Eastland County

Arab Gasoline Co.'s No. 1 Phillips made 81 bbls. at 3,610-20 feet. Davis and others' No. 1 Craig and others was dry and abandoned at 1,310 feet. Hickok P. & D. Co.'s No. 3 Kimbrough was dry and abandoned at 1,605 feet. States Oil Corp.'s No. 6 Hise estate was dry and abandoned at 1,926½ feet. Texas Pacific Coal & Oil Co.'s No. 4 Higginbotham was drilled to a total depth of 4,108 feet, plugged back to 3,700 feet, shot with 20 quarts at 3,668-88 feet and had an initial production of 30 bbls. of oil and 500,000 feet of gas.

Palo Pinto County

Brazos River Gas Co.'s No. 2 Costello had an initial production of 5,500,000 feet of gas at 1,430-43 feet. Its No. 4 Wester had an initial production of 4,500,000 feet of gas at 1,335-76 feet.

Stephens County

Mid-Tex Petroleum Co.'s No. 9 Cunningham had an initial production of 20 bbls. of oil and 5 bbls. of water at 3,203-3,183 feet.

Shackelford County

Big State Oil Co.'s No. 8 Russ-Webb was dry and abandoned at 896 feet. Humble Oil & Refining Co.'s No. 2 Newell was drilled to a total depth of 1,534 feet and had an initial production of 18 bbls. Moutray Oil & Gas Co.'s No. 1 Bowman was dry and abandoned at 1,533 feet. Roeser & Pendleton and Continental's No. 4-A-88 Cook was drilled to a total depth of 1,436 feet, plugged back to 1,365 feet and had an initial production of 25 bbls. Their No. 1-A-146 Cook had an oil show at 1,611-27 feet and made 100,000 feet of gas, drilled to a total depth of 1,625 feet and was dry and abandoned. F. E. Shaheen's No. 2 Whitney was dry and abandoned at 606 feet. Texas Consolidated Oil Co.'s No. 1-B Reynolds had an initial production of 10 bbls. at 943-49 feet.

PANHANDLE COMPLETIONS

Carson County

Empire Gas & Fuel Co.'s No. 16 Burnett, located C NW cor., Section 104, Block 5, I.&G.N.R.R. Survey, topped the pay at 2,422 feet, was drilled to a total depth of 2,684 feet and had an initial production of 22,000,000 feet of gas.

Gray County

Champlin Refining Co. and others' No. 1 Cook-Faulkner, 330 feet each way from the southwest corner of the west 120 acres of the east 200 acres, Section 30, Block B-2, H.&G.N.R.R. Survey, topped the pay at 2,855-80 feet, was drilled to a total depth of 2,920 feet and had an initial production of 240 bbls. Cockrell & McIlroy's No. 2 J. C. McConnell had an initial production of 400 bbls. at 3,152-90 feet and was drilled to a total depth of 3,252 feet. Empire Gas & Fuel Co.'s No. 1 R. M. Brown, C SE, Section 238, Block B-2, H.&G.N.R.R. Survey, made 5,000,000 feet of gas at 2,705-2,933 feet. Danciger Oil & Refining Co.'s No. 2 Shell-Shaw, 330 feet each way from SE cor. E half SW, Section 5, Block 1, A. C.H.&B. Survey, had an initial production of 2,100 bbls. at 2,671-78 feet. Operators Oil Co.'s No. 3 Cook-Faulkner, 330 feet each way from southeast of west 90 acres, Section 30, Block B-2, H.&G.N. R.R. Survey, topped the pay at 2,833 feet, was drilled to a total depth of 2,839 feet and had an initial production of 1,798 feet. Phillips Petroleum Co.'s No. 3 Palmer had an initial production of 5,200 bbls. at 2,877-80 feet. The Texas Company's No. 2 M. A. Shaw, in Section 5, Block 1, A.C.H.&B.R.R. Survey, topped the pay at 2,602-11 feet, was drilled to a total depth of 2,624 feet and had an initial production of 676 bbls.

Wheeler County

Marland Oil Co.'s No. 4 Finley-Brown topped the pay at 2,872 feet, was drilled to a total depth of 2,880 feet and had an initial production of 1,392 bbls. the first 24 hours. Magnolia Petroleum Co.'s No. 1 Trostle topped the pay at 1,795 feet, was drilled to a total depth of 1,810 feet and had an initial production of 45,000,000 feet of gas.

WASHINGTON REALIZES COMPACT IMPRACTICABLE

(Continued from Page 40)

arise relating to production from the numerous oil structures that might be developed by unit operation in drilling. Methods of development would be among the problems coming before some government agency, including the spacing of wells, the use of natural gas, and any other essential operation involved in the transaction.

There has been no suggestion on the part of the administration or from members of the Senate or the House of Representatives in respect to any control of the price of oil as a guide to the amount of production that should be encouraged, but on the part of many of those who have discussed the proposed interstate compacts there is a fear that price fixing will loom up in some form as a menace to the industry. There is no reason to believe that any suggestion for price fixing would be successful but it has often been said that when once legislation has been proposed in whatever reasonable form it may have been initiated there is no telling what Congress might do. In other words, the pitfall of price fixing cannot be eliminated as one of the possibilities of congressional approval of interstate compacts for the control of oil production.

Simpler Way Preferred

The greatest opposition to providing for these interstate compacts is that many of the best informed oil producers who sincerely approve the efforts of the Federal Oil Conservation Board believe conservation can be brought about by simpler and more practical methods through permissive legislation by the states in which oil fields are located and in the absence of restrictive state legislation they believe that unit production properly carried out by the lease holders will accomplish the same purpose.

There are very few advocates of coercive measures in connection with the production of oil. It is realized that in attempts to put into effect unit production there will be some producers who will not voluntarily and readily throw in their interests with the majority. Their presence as owners in structures to be developed is looked upon as embodying a difficult problem but not a problem that is unsurmountable or which necessarily will defeat unit production by voluntary effort.

At any rate views are expressed that, before any elaborate plan involving interstate compacts with congressional approval and a government agency to pass judgment upon methods of producing oil are resorted to, the industry itself should be given more time to see how far it can go in bringing about practical conservation with no more than permissive legislation, if the oil states so desire, to assure producers that their reasonable efforts shall not be interfered with so long as no monopoly of production is established.

With many separate oil pools operating under unit development and production, these pools being located in several states, monopoly is believed to be as far removed as it is under present conditions. There will be the same competition as exists today but this competition will be between the separated oil pools with thousands of independent producers who would be quick in increasing their production if at any time undue restriction should appear to create any undue increase in the price of oil.

Everyone now acknowledges that oil production is an intrastate transaction so long as it is restricted solely to production. It is a matter for the states alone. Such unit production might well be encouraged by state legislation for the prevention of waste by means of permissive state legislation.

Antitrust Bogy

The Federal Oil Board has given very little sanction in the early years of its operation to the idea that unit production violated antitrust laws. In its report of September 1926, when Secretary Hubert Work of the Department of the Interior was chairman of the board, he referred to the suggestion that remedial measures for the conservation of oil by co-operative agreements would violate federal and state laws as having served "as an actual or imagined or pretended barrier to co-operative action." The language used in this report is of particular interest at this time. The board said:

"Another avenue of relief is the restriction of development or operation through voluntary agreement of owners. This suggestion is not novel for it has to a limited extent been tested in actual practice and can be discussed in the light of experience. Agreement between neighboring property owners as to the handling of their common property and the protection of their mutual rights is more and more generally recognized as making for economy in development and efficiency in extraction as compared with competitive drilling. Indeed, operators of experience have expressed to the board the opinion that duplication in drilling and the consequent unnecessary reduction of gas pressure constitute the cause of all waste worth mentioning in the production of oil. The danger that much of the remaining oil will be brought to the surface before either courts or lawmakers can be expected to remedy the situation has also prompted the expression of opinion to the board that voluntary co-operation offers the only practical hope.

"The question of the legality of co-operative agreements has been frequently raised in the recent discussion of remedial measures. The uncertainty as to whether the economic betterment through substituting co-operation for competition runs counter to federal and state laws has served as an actual or imagined or pretended barrier to co-operative action and the removal of that legal inhibition is asked, although the suggestion comes from the industry that 'to protect the public, approval of such agreements by some commission or board should be required.' This doubt should be removed by appropriate legislation.

Approved by Oil Board

"The voluntary co-operation proposed would need to include the landowners and operators in a single field or pool, which is a relatively small unit of production, so that the possibility of monopolistic control need not be feared. Indeed, co-operative regulation of either the development or the operation of a single pool could control only a small percentage of the country's production. The largest flush pool in recent years—Santa Fe Springs in California—contributed 11 per cent to the output in 1923, and no pool contributed more than 8 per cent to the output of either 1924 or 1925. Indeed, Smackover, Ark.; Long Beach, Calif.; and Tonkawa, Okla.— together accounted for only 16 per cent of the country's production. Even the flood of oil from the Cushing Pool at the time of its maximum yield in 1914 and 1915 is to be credited with only 17 per cent of the country's production in those years when the total yield was only a third of that of 1925."

Judge Beaty's Opinion

Referring to unit production Judge Amos L. Beaty writing in The Oil and Gas Journal, February 23, 1928, said:

"The Committee of Nine recommends the passage of enactments making clear the legality of agreements for unit operation, at the same time expressing the opinion that they do not violate existing law. When the matter of obtaining legislative approval of curtailment agreements was presented to the American Petroleum Institute somewhat over a year ago it was not thought that agreements for unit operation required anything of the kind; hence they were not embraced in the resolution. Of course, the legislation would not be unwelcome but if the state legislatures fail to pass it the industry should not hesitate. The real purpose of such agreements is the protection of private property, not the restraint of trade. Among the things accomplished are the orderly and economical production of oil, the prevention of unwarranted drainage and waste, the conservation of natural gas and its application to its most useful purpose in the production of oil, and in general a wise and essential protection of properties and values. Only incidentally and in a remote degree is commerce restrained. Such restraint, or tendency toward restraint is no more than is to be found in hundreds of daily transactions in the course of regular and legitimate business.

Pooling of Interests

"Texas doubtless has the most extreme antitrust law of any state in the Union, so far as wording is concerned, and it may be said in strict construction that the pooling of interests in oil production, even when limited to a single structure, is prohibited. But no such construction is allowable. So far as a statute has a meaning of that kind it must be condemned as unconstitutional. This doctrine was ruled by the Supreme Court of the United States in the Standard Oil dissolution suit. The court said, in effect that although the Sherman Act in terms prohibited every combination which restrained interstate commerce, it could not be given a literal meaning and thus prohibit such combinations as were not vicious or unreasonable in their nature, because in that case it would unreasonably restrict the right to contract, and would unreasonably operate upon the right to acquire and hold property. The law was sustained and applied in that proceeding because of the rule of reason. Or, to put it another way, except for the rule of reason the Sherman Act did invade the right to contract and the right to acquire and hold property, but, with the rule of reason read in, it had no such effect and therefore was valid and enforceable. Only the fact that the strict and literal construction was unnecessary saved the act from condemnation. And precisely the same constitutional limitations apply to state legislation. If a statute of Texas or any other state is susceptible of a construction which would preclude a combination for unit operation, it is, to that extent and in consequence

of that very fact, unconstitutional and void.

"It is time we ceased running from shadows. The industry should take its stand and refuse to be moved. No one should decline to go into unit operation if the basis is fair and the arrangement workable."

Judge Ames' View

Judge C. B. Ames is in hearty approval of plans for the oil companies to work out their own salvation in taking care of the development and operation of single oil pools.

"I think it is equally clear that the statement of the committee (Advisory Committee of Nine) that 'it seems clear to us than any agreement for the co-operative development and operation of a single pool even though it involve the control or curtailment of production from that pool, is not a contract or agreement in violation of any antitrust law, either state or federal,' states a clear principle of law, and that there is no legal obstacle in the way of an agreement for the co-operative development and operation of a single pool," says Judge Ames.

MOST PHENOMENAL WELL IN THE WORLD

(Continued from Page 41)

is not the greatest feature at present, for the steady increase in oil and gas production has rather overshadowed its claim to the world's deepest producing well. On July 14 it set its last high peak in oil when it flowed 2,712 bbls. of oil with 24,908,000 feet of gas. The peak in gas was also reached when it gauged 25,177,000 feet on July 5. New peaks are being established every week, and watching the well week by week for new highs has rather become a game with many who are extremely interested in its climb to higher levels.

After seeing the possibilities of deep drilling in this field and watching the performance of the Group No. 1 well, the Big Lake Oil Co., the only other company holding acreage in this field, decided to drill four tests on its acreage. One of these tests is now down 7,775 feet and has encountered formations similar to those found in the former deep tests, all the way down the hole, one of the deeper pays being struck from 6,830-35 feet with an increase at 6,950 feet. Oil and gas both showed up at this depth.

This test of the Big Lake Oil Co. is designated as No. 131 University, and is located 2,240 feet from the south and 920 feet from the east line of Section 1, Block 2, University Survey, a west offset to the former deep test.

Compared With Drake

The rig used in drilling the first oil well in the United States, by Colonel Drake in 1859, at Titusville, Pennsylvania, is pictured to show the difference between the first thing in drilling wells and the latest up to date tools and methods. It has been a long step, advancing from the East across the continent through the many states now producing crude oil, and drilling methods and equipment have advanced along with exploration and discovery. Colonel Drake's derrick stood only 34 feet high, while its big cousins now raise themselves above 122 feet in the air.

The derrick over the Big Lake Oil Co.'s No. 2-C University, another deep test in the Big Lake Field, is shown in the accompanying picture. It is a 122-foot Lee C. Moore Co. derrick, with 4-inch pipe legs and re-legs, and shows up in quite a striking contrast to the surrounding derricks which have been used in drilling wells to the 3,000-foot level. Those derricks are only 81 feet high. Portable transformers can be seen on trucks in the foreground. They have been used in stepping up power from the Pecos Valley Light & Power Co. line, which is furnishing electricity for drilling this new deep test, but two Westinghouse special oil field type transformers are now displacing those shown in the picture. The road in the forepart of the picture runs north and south, and separates the Big Lake and Texon Oil & Land Co. (Continental Oil Co.) leases in this field.

The deep tests in this field, as well as many of the wells being drilled in the other fields of west Texas, are being put down with electric power, furnished by the large network of high lines which web this entire district, and it looks as though electric drilling would gain considerable headway in months to come, although gasoline motor and steam power will no doubt always be used in drilling wildcats, especially those in the far corners which are excluded from electric high lines. However, a few wildcats have already been drilled with electric power, and a few companies operating in the Yates Pool, Pecos County, have drilled a number of wells in the field by this method, while other companies are using it in other fields for pumping. The Big Lake No. 2-C is using two gas proof protected type Westinghouse motors which will generate an enormous amount of power and speed when needed.

—Courtesy Oil Well Supply Co.

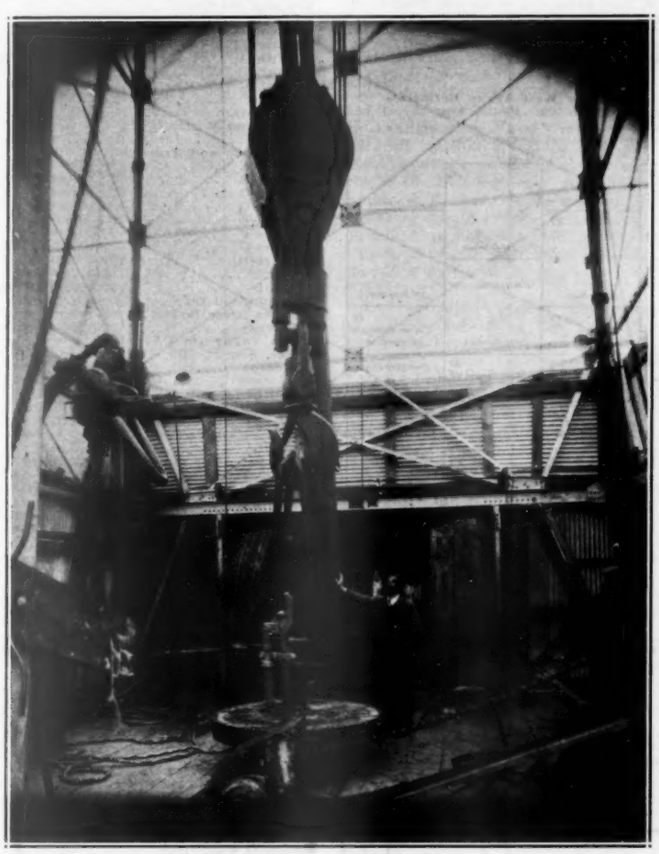
Motors and differential drive.

Mammoth Equipment

Another picture shows the mammoth five sheave block used on this test. It is alemite lubricated, has Timken bearings, and is made of manganese steel, the sheaves being interchangeable with the sheaves in the crown block. From the top of the block to the bottom of the ball bearing swivel casing hook is 14 feet. Old cable tool bullwheels can be seen on the back part of the derrick floor, and rotary clutch unit on the right.

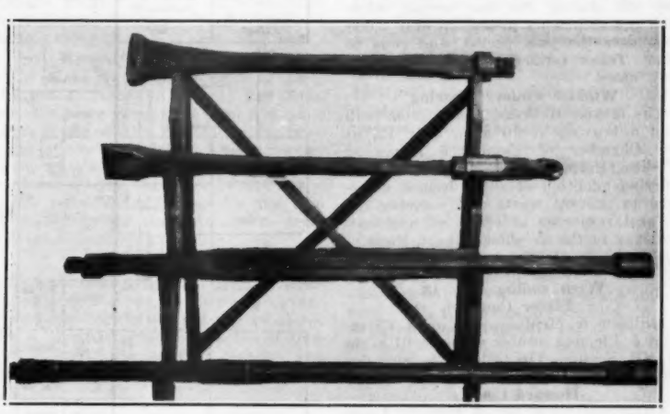
As new and better equipment was manufactured after Colonel Drake's well was drilled, with ideas of better efficiency gained from watching his well put down, so come these new ideas and better methods for drilling below the previous accustomed depths, and the accompanying pictures will give some idea as to what has been evolved for drilling deep tests, tests which will tax the stoutest materials, and call for a great amount of power and speed. The two motors and Hild automatic differential drive, shown in one of the pictures, are but a couple of the many new and improved drilling devices used in modern drilling. The deep test using this new and improved equipment has had some trouble in losing the "returns," and 8,000 bbls. of mud was pumped in the hole, it all disappearing as if the test had drilled into a huge crevasse.

The lack of the proper kind of drilling mud in west Texas has caused quite a difficult situation at different times in a couple of the fields, especially the Winkler County Pool, where mud had to be hauled in from Sweetwater and El Paso, Texas, boosting the drilling costs considerably, but the Big Lake Oil Co. has only a 30-mile haul for its mud supply, which will keep down rotary drilling expense. Rotaries are now coming into their own in the Big Lake Field, all the past drilling having been done with cable tools. Supply house representatives and rotary and cable tool advocates, as well as production men with the companies, will all be watching Big Lake Oil Co.'s No. 2-B to see what success the rotary will have in its premier test in this area.



—Courtesy Oil Well Supply Co.

Mammoth casing block used.



—Courtesy The Kendall Studio, Titusville, Pa.

Tools used on the Drake well.

SPANISH OIL MONOPOLY

Spanish Petroleum Monopoly shareholders will receive out of the organization's first year of business, recently completed, a dividend of 6.5 per cent, the report of the Commercial Attache Charles A. Livergood, Madrid, to the Department of Commerce states. Income from the monopoly for the state treasury for the year totaled 110,000 pesetas (par exchange value $0.193), besides 2,500,000 pesetas for dividend on freed shares.

WEST TEXAS FIELDS

(Continued from Page 71)

Kimberlin. The company had a half interest in the lease with Kimberlin and bought out his interest. Total depth of the Texon well is 1,300 feet, total depth of the Rio Pecos test is 1,336 feet. It is about 1½ miles southeast of the nearest production in the Yates vacancy strip which is owned by the Mid-Kansas and Transcontinental Oil Cos.

Continental Oil Co.'s (Texon Oil & Land Co.'s) No. 1-B University climbed above the 2,700-bbl. mark during the week when it set a new peak at 2,712 bbls. with 24,908,000 feet of gas on July 14.

The Humble Pipe Line Co. has contracted with the Warner-Quinlan interests to run the latter's production from its Crane County leases where it has better than 2,000 bbls. daily. The leases from which this production is obtained is the Davis-University lease, Collett-University lease and Jones-University lease. A half million barrels in storage was also purchased by the company from Warner-Quinlan, believed to be at posted prices for crude in this field.

The Continental Oil Co. has leased eleven 80,000-bbl. steel tanks from the Reagan County Purchasing Co. at its Reagan County tank farm at Kemper, and the tanks are to be used for storage of crude from the Continental leases in the Yates Pool, Pecos County. The Humble Pipe Line Co. will carry the oil from the field to the tanks at Kemper, and will also deliver from the tanks out through one of its trunk lines.

Drawing on Storage

There is a mute story in the production and distribution figures of West Texas for the past week, for it shows that when crude is needed to supply the demands of the many refiners all over the country, they will not hold back because it is "sour," and are extremely glad to get it, if they can. Drawing on West Texas storage for the first time, in May of this year, the drafts have risen to the huge amount of 55,014 bbls. daily during the past week, whereas in the past few weeks they have not gone much over 8,000 bbls., the previous week showing only 7,958 bbls. daily from storage.

Pipe line runs was the prime cause of this great draft from storage, for the trunk lines carried 54,000 bbls. more than they did during the last period, while tank car shipments picked up only 2,068 bbls. over the past period, and runs to West Texas refineries only about 800 bbls. more.

Winkler County Hearing

The Texas Railroad Commission will hold a hearing at 10 a.m., July 12, at the Chamber of Commerce rooms at Wichita Falls, for the purpose of considering adoption of rules deemed necessary to prevent waste and conserve the natural resources of crude oil and natural gas in the Winkler County Field.

WEST TEXAS COMPLETIONS
Week ending July 13

Fisher County

Gillman & McMurray's No. 1 Cleveland & Fleming, center of south 91 acres of SE Section 116, Block 2, was dry and abandoned at 3,815 feet.

Howard County

California Co.'s No. 6 Roberts Lease No. 2, located 330 feet from south and 1,650 feet from east of Section 137, Block 29, W.&N.W.R.R. Survey, had an initial production of 700 bbls. at 2,957-78 feet.

Loving County

Lockhart & Co.'s No. 2 Hazell, located 330 feet from NE and SE cors. of Section 84, Block 33, topped the lime at 4,190 feet, topped the salt at 700 feet, was shot with 150 quarts at 4,190-4,233 feet and had an initial production of 165 bbls.

Jones County

E. M. Treat's No. 1 Hodge, located in the A. Bell Survey, was dry and abandoned at 2,000 feet.

Mitchell County

California Co.'s No. 2 Clark, Lease No. 2, located 2,190 feet from the south and west of Section 14, Block 28, T-1-N. T.P.R.R. Survey, topped the pay at 2,962 feet, was drilled to a total depth of 3,115 feet, was shot with 320 quarts at 2,957-3,080 feet and had an initial production of 29 bbls.

Reeves County

R. R. Penn's No. 1 Bowles, 330 feet from north and east of Section 36, Block 50, T-8, T.&P.R.R. Survey, was dry and abandoned at 5,612 feet.

Runnels County

Nourse & Tilton's No. 1 Cramer, 200 feet south and 600 feet east of NW cor. of Survey No. 2, G.C.&S.F.R.R. Survey, was dry and abandoned at 3,966 feet.

Pecos County

Rio Pecos Oil Co.'s No. 2 Yates, located in Section 543, Block 1, was dry and abandoned at 1,336 feet. Taylor-Link Oil Co.'s No. 1 University was drilled to a total depth of 1,628 feet topped the pay at 1,613 feet and had an initial production of 115 bbls. flowing.

Winkler County

Gulf Production Co.'s No. 1-B Daugherty, 2,310 feet from north and 330 feet from west of Section 22, Block 26, P. S. Land, topped the pay at 2,675 feet, was drilled to a total depth of 2,882 feet and had an initial production of 3,288 bbls. daily at 2,675-2,750 feet. Humble Oil & Refining Co.'s No. 12 Hendricks-C, 1,980 feet from south and 1,325 feet from west of Section 10, Block B-12, topped the salt at 1,580 feet, topped the lime at 2,478 feet, had a gas show at 2,640 feet, was drilled to a total depth of 2,753 feet and had an initial production of 241 bbls. in five hours. Simms Oil Co.'s No. 2 Sealy, located 2,434 feet from north and 990 feet from east of Section 50, Block F, was temporarily abandoned. Southern Crude Oil Purchasing Co.'s No. 3 Hendricks T-88-CX, located 2,310 feet from south and 330 feet from east of Section 21, Block 26, topped the lime at 2,457 feet, topped pay at 2,695 feet, was drilled to a total depth of 2,808 feet and had an initial production of 2,000 bbls. daily, 28 per cent water. Skelly Oil Co.'s No. 2-C Hendricks, located 1,265 feet from south and 2,310 feet from east of Section 10, Block B-12, P. S. Land, was dry and abandoned at 3,155 feet. Tidal Oil Co.'s No. 1 Scarborough was drilled to a total depth of 3,054 feet, topped the pay at 2,945-50 feet and the production increased to 220 bbls. at 3,035 feet.

ESTIMATED DAILY AVERAGE PRODUCTION WEST TEXAS
Week ending July 13

County—	Wells	Prod.
Crane County	308	37,500
Crockett County	43	1,632
Ector County	3	....
Fisher County	7	1,020
Glasscock and Howard	351	43,503
Jones County	83	3,425
Loving County	12	720
Mitchell County	141	2,761
Pecos County	308	122,069
Reagan County	243	18,286
Runnels County	3	45
Scurry County	5	30
Upton County	238	9,381
Ward County	7	1,437
Winkler County	606	139,500
Total this week	2,358	381,309
Total last week	2,349	377,670
Difference	9	3,639

PIPE LINE RUNS
June 26 to July 3
Runs Through Trunk Lines

	Last period
Atlantic P. L. Co., Port Arthur, Tex.	38,541
Gulf P. L. Co., to coast via Ranger Tex.	36,407
Humble P. L. Co., via Comyn, Tex.	53,056
Humble P. L. Co., Ingleside, Tex.	52,399
Illinois P. L. Co., via Del Rio, Tex.	50,000
Magnolia P. L. Co., to De Leon, Tex.	26,027
Pasotex P. L. Co., El Paso, Tex.	10,871
Shell P. L. Co., Healdton, Okla.	41,994
Shell P. L. Co., Houston, Tex.	27,102
The Texas Company, Houston, Tex.	7,228
Total	343,625

Tank Car Shipments

Reagan Co. P. Co., Kemper, Tex.	185
Thomas & Brann, Grant City	....
Orient, McCamey, Tex.	140
The Texas Company, Crossett, Tex.	359
T. P. Coal & Oil Co., McCamey, Tex.	638
American Pet. Co., Pyote, Tex.	9,660
Skelly Oil Co., Pecos, Tex.	....
Southern Crude O. P. Co., Wickett, Tex.	18,522
Total	29,504

Runs to West Texas Refineries

Amarillo Prod. Co., Pyote, Tex.	1,179
Bluebonnet Ref. Co., Wickett, Tex.	3,352
Burford Ref. Co., Pecos, Tex.	4,946
Col-Tex Ref. Co., Colorado, Tex.	7,000
Cosden Ref. Co., Big Spring, Tex.	17,223
Great Western Ref. Co., Big Spring, Tex.	4,950
Humble Oil & Ref. Co., McCamey, Tex.	7,346
Midland Ref. Co., Midland, Tex.	1,500
Tonkawa Ref. Co., Pyote, Tex.	2,361
Valley Ref. Co., Pyote, Tex.	3,080
Big Spring Ref. Co., Big Spring, Tex.	2,635
Total	55,572

Summary

	Previous week	Last period
Pipe line runs through trunk lines	289,198	343,625
Tank car shipments	27,572	29,504
Runs to West Texas refineries	54,752	55,572
Total daily distribution	371,522	428,701
Total daily production	379,480	373,687
Daily aver. from storage	7,958	55,014

PECOS COUNTY
YATES POOL
Week ending July 9

Company, lease—	Wells	Prod.
M. H. Black:		
Fee	1	15
California Co.:		
Yates—Lease 1	17	7,969
Smith—Lease 1, Sec. 27	3	388
Smith—Lease 1, Sec. 23	7	1,969
Smith—Lease 1, Sec. 21	3	1,144
Smith—Lease 2	2	104
Smith—Lease 3	12	1,849
Smith	1	9
Tippett—Lease 1	1	34
Cosby Drilling Co.:		
Smith	1	250
Gulf Prod. Co.:		
All leases	37	14,111
Humble Oil & Ref. Co.:		
Smith-A	10	2,058
Smith-B	5	904
Kirby Pet. Co.:		
Tippett	2	60
Kirby Pet. and Edson:		
Tippett	1	240
Marland Oil Co.:		
Yates-A	5	540
Yates-A salvage	..	6,277
Mazda & Savoy:		
Smith	2	694
McCarty Oil Co.:		
Gray	1	12
Bennett	1	5
McMan Oil & Gas Co.:		
Smith-A	1	1,635
Smith-B	4	1,408
Smith-C	6	826
Tippett	2	270
Richardson	1	75
McMan and Marland:		
Yates	17	5,302
Mid-Kansas and Transcon.:		
Yates-A	27	17,926
Yates-B	27	6,465
Yates-C	11	7,573
Yates-D	7	7,891
Yates-E	1	100
Yates-F	4	740
Yates-G	4	1,433
Yates-H	8	7,159
Smith	4	1,879
Smith	18	4,111
Grayburg Oil Co.:		
Pecos River Bed	6	468
Salvage	..	1,000
Pecos Valley Oil Co.:		
Fee, Sec. 22, Blk. 26	2	88
Monroe	1	75
Ramsey	2	509
Smith	2	660
Plymouth:		
Perry	1	off
Red Bank Oil Co.:		
Smith	5	437
Shell Pet. Corp.:		
Tippett	11	2,674
Smith	9	988
Smith-B	1	488
Smith-D	3	564
Smith-E	1	20
Simms Oil Co.:		
Smith	7	6,014
Skelly Oil Co.:		
Tippett	1	90
Taylor-Link:		
University	1	43
Total Yates Field	307	117,543

DAILY AVERAGE PRODUCTION BY LEASES WINKLER COUNTY
Week ending July 9

Company, farm, sec., blk.—	Wells	Prod.
Amerada Pet. Corp.:		
Cowden, 3, B-12	3	476
Atlantic O. P. Co.:		
Hendricks-A, 34, B-5	8	1,736
Hendricks-B, 44, 26	5	252
Hendricks-D, 29, B-5	8	2,024
Hendricks-E, 41, B-5	6	1,854
Hendricks-G, 46, 26	7	379
Hendricks-H, 30, B-5	1	off
Atlantic and Collett:		
Hendricks-F, 40, 26	13	1,896
Bankers Prod. Co.:		
Hendricks, 30, B-5	1	12
V. T. Bolin:		
Brown-Altman, 4, B-5	1	7
California Co.:		
Hendricks, 29, B-5	7	989
Cranfill & Reynolds:		
Hendricks-A, 28, B-5	2	427
Hendricks-B, 35, B-5	1	148
Hendricks-C, 33, 26	2	51
Hendricks-E, 33, 26	2	732
Cranfill and Texon:		
Hutchings, 47, 26	1	80
Culberson Bros.:		
Hendricks, 40, B-5	1	68
Eastland Oil Co.:		
Hendricks, 35, B-5	2	376
Hendricks-B, 41, 26	1	177

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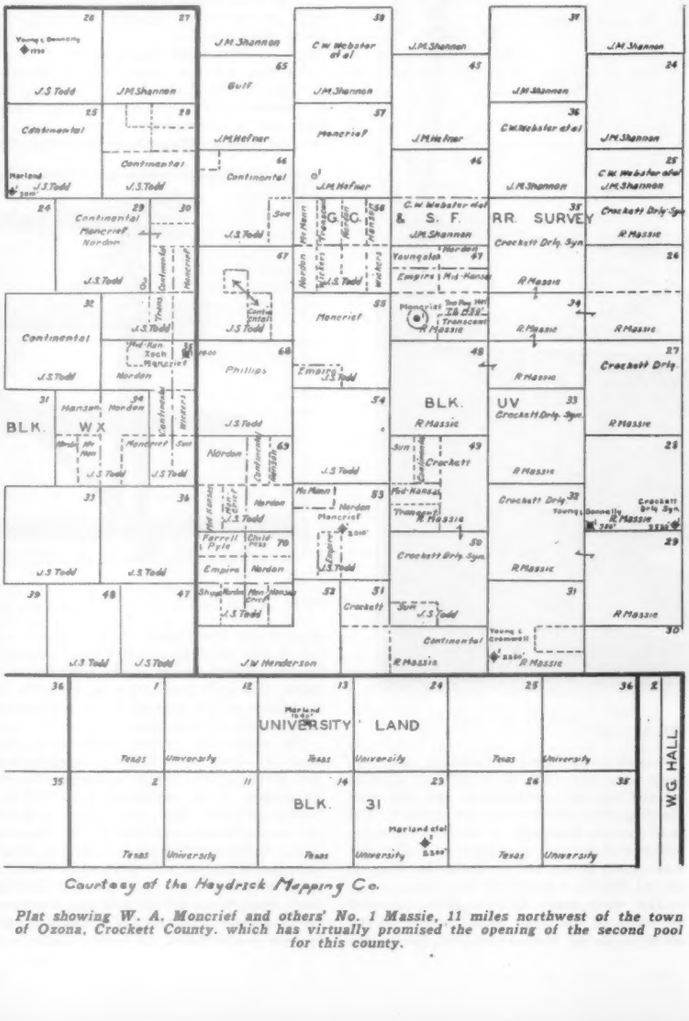


Courtesy of the Haydrick Mapping Co.

Plat showing W. A. Moncrief and others' No. 1 Massie, 11 miles northwest of the town of Ozona, Crockett County, which has virtually promised the opening of the second pool for this county.

Gulf Prod. Co.:		
Hendricks-A, 34, B-5	13	4,772
Hendricks-B, 45, 26	11	6,784
Hendricks-C, 40, B-5	6	746
Hendricks, 44, 26	2	508
Cowden, 3, B-12	3	1,712
Humble Oil & Ref. Co.:		
Hendricks-A, 34, B-5	17	5,358
Hendricks-B, 29, B-5	6	1,079
Hendricks-C, 32, 26	8	673
Hendricks-B, 47, 26	7	572
Hendricks-C, 10, B-12	11	5,806
Independent Oil & Gas Co.:		
Hendricks-A, 34, B-5	7	1,474
Howe-B, 44, 26	3	162
McCabe, 36, B-5	2	233
Hendricks, 42, B-5	1	10
Vardeman-B, 41, B-5	7	554
Magnolia Pet. Co.:		
Hendricks, 29, B-5	8	422
Marland Oil Co.:		
Hendricks, 33, 26	4	800
Hendricks, 29, 26	2	132
Hendricks, 34, 26	2	201
May Prod. Co.:		
Hendricks, 34, 26	1	9
American Maracaibo:		
Hendricks-A, 28, B-5	1	45
Hendricks-B, 28, B-5	1	155
Mining & Engineering:		
Hendricks, 10, B-12	1	14
Murchison & Cranfill:		
Hendricks-A, 35, B-5	3	851
Hendricks-B, 35, B-5	3	619
Hendricks-C, 35, B-5	1	22
Hendricks-H, 35, B-5	1	1,359
Hendricks-I, 34, 26	2	462
Prairie Oil & Gas Co.:		
Hendricks, 40, 26	6	1,231
Cowden, 3, B-12	6	3,942
Pure Oil Co. (Lion Oil):		
Hendricks-A, 41, B-5	11	1,818
Hendricks-B, 34, B-5	13	3,672
Hendricks-C, 45, 26	14	7,464
Hendricks-D, 44, 26	1	129
Republic Prod. Co.:		
Hendricks-A, 45, 26	12	2,069
Hendricks-B, 41, B-5	5	189
Shell Pet. Corp.:		
Hendricks-A, 45, 26	6	1,040
Hendricks-B, 29, B-5	6	1,070
Hendricks-C, 29, B-5	8	678
Hendricks-D, 41, B-5	6	282
Hendricks-E, 40, B-5	3	868
Hendricks-F, 46, 26	8	1,542
Hendricks-C, 39, 26	1	34
Shell-The Texas Company:		
Cowden-A, 3, B-12	6	1,389
Hendricks, 45, 26	6	1,419
Hendricks-A, 29, B-5	11	2,614
Hendricks-B, 40, 26	6	715
Hendricks-C, 40, 26	6	1,811
Hendricks-D, 40, 26	6	429
Hendricks-E, 39, 26	4	382
Skelly Oil Co.:		
Hendricks, 40, 26	12	5,997
Hendricks-B, 39, 26	2	19
Hendricks-C, 39, 26	1	259
Southern Crude Oil Purch. Co.:		
T-67 Hendricks-A, 42, B-5	3	136
T-67 Hendricks-3-A, 4, B-12	5	476
T-67 Hendricks-B, 44, 26	5	527
T-67 Hendricks-3-B, 33, 26	4	505
T-67 Hendricks-C, 33, B-5	5	615
T-67 Hendricks-2-D, 28, 26	4	837
T-67 Hendricks-E, 42, B-5	4	196
T-67 Hendricks-F, 33, B-5	5	668
T-68 Hendricks-3-A, 35, B-5	3	155
T-68 Hendricks-B, 46, 26	2	222
T-88 Hendricks-A, 44, 26	6	826
T-88 Hendricks-B, 4, B-12	4	924
T-88 Hendricks-C, 28, B-5	8	1,448
T-88 Hendricks-D, 4, B-12	6	3,250
T-88 Hendricks-N, 28, B-5	7	1,161
T-88 Hendricks-I, 30, B-5	7	1,309
T-88 Hendricks-J, 30, B-5	5	521
T-88 Hendricks-K, 41, 26	7	1,678
T-88 Hendricks-L, 4, B-12	4	899
T-88 Hendricks-M, 33, 26	31	13,817
T-88 Hendricks-N, 28, 26	7	1,605
T-88 Hendricks-O, 28, 26	4	830
T-88 Hendricks-P, 28, 26	2	454
T-88 Hendricks-Q, 27, 26	2	868
T-88 Hendricks-R, 28, 26	2	762
T-88 Hendricks-S, 34, 26	4	1,261
T-88 Hendricks-T, 34, 26	7	1,082
T-88 Hendricks-U, 41, 26	9	1,577
T-88 Hendricks-V, 29, 26	1	62
T-88 Hendricks-W, 5, B-12	1	322
T-88 Hendricks-CX, 21, 26	3	901
T-89 Hendricks-A, 35, B-5	3	290
T-89 Hendricks-B, 35, B-5	2	472
T-89 Hendricks-C, 35, B-5	3	718
T-89 Hendricks-D, 35, B-5	1	201
T-89 Hendricks-E, 40, B-5	3	191
T-89 Hendricks-F, 40, B-5	2	258
T-89 Hendricks-H, 46, 26	2	249
T-89 Hendricks-I, 10, B-12	2	155
T-89 Hendricks-J, 9, B-12	8	2,654
T-90 Hutchings, 47, 26	1	245
Texon Oil & Land Co.:		
Hendricks-A, 41, B-5	6	526
Hendricks-B, 45, 26	6	1,400
Winkler O. P. Co.:		
Hendricks, 33, 26	1	55
Total Hendricks Pool	579	135,588
LECK AREA		
Atlantic, Kesslar & Logan:		
Leck, 3, 74	2	721
Amerada Pet. Corp.:		
Leck, 3, 74	2	580
Empire G. & F. Co.:		
Daugherty, 3, 74	3	210
Magnolia Pet. Co.:		
Scarborough, 1, C-22	1	132
Gulf Prod. Co.:		
Scarborough, 1, C-22	1	64
Daugherty, 3, 74	1	409
Shell-Llano Oil Co.:		
Daugherty, 1, C-22	4	240
Shell-Danciger:		
Daugherty, 3, 74	2	150
Skelly Oil Co.:		
Daugherty, 22, 16	2	639
Prairie Oil & Gas Co.:		
Daugherty, 3, 74	1	130
Scarborough, 1, C-22	1	51
Warner-Quinlan:		
Leck, 3, 74	1	258
Total Leck Pool	22	3,948
O'BRIEN POOL		
Marland Oil Co.:		
Morton, 10, B-12	2	176
Wentz Oil Corp.:		
Morton, 10, B-12	1	433
Simms Oil Co.:		
Sealy, 50, F.	1	26
Richardson et al:		
Stockton, 50, F.	1	171
Total O'Brien Pool	5	806
Total Winkler County Field	606	140,342

FURTHER DECLINE IN GASOLINE PRICES

(Continued from Page 36)

wagon and service station prices than they are with the refinery tank car market in the Mid-Continent. Crude oil price reductions would mean reductions in tank wagon prices so that the position of these companies would not be improved by any change at this time.

Output and Stocks

The statistical department of the Western Petroleum Refiners Association has prepared a table showing the change in gasoline output and stocks for the first five months of this year compared with the same period last year. The following changes are shown:

Area—	Increase gasoline output (%)	Increase stocks May 31 (%)
East Coast	8.0	14.4
Appalachian	9.4	46.8
Indiana-Illinois	24.2	41.5
Oklahoma-Kansas	6.7	56.4
Texas inland	34.1	35.5
Arkansas-Louisiana inland	27.9	237.4
Texas Gulf	15.4	6.9
Louisiana Gulf	16.7	55.3
Rocky Mountains	7.8	19.5
California	37.0	*8.0
United States	18.5	16.8
Mid-Continent	13.9	56.7

*Decrease.

In general the greatest price weakness is coming from the areas which have had the largest increase in gasoline output and the largest accumulations of gasoline stocks. Oklahoma and Kansas refiners with an increase of only 6.7 per cent in gasoline output are below the average increase of 18.5 per cent for the entire country. Refiners in those two states, however, due to outside competitive conditions, have not been able to move their output currently and this accounts for the 56.4 per cent increase in gasoline stocks.

In the Mid-Continent the principal weakness comes from the Texas inland and the Arkansas-Louisiana inland group of refiners. Due to expansion of West Texas refining facilities the Texas inland refiners as a group increased their gasoline output 34.1 per cent the first five months of this year with a 35.5 per cent increase in gasoline stocks on May 31.

The Arkansas-Louisiana inland group which were in excellent shape a year ago have increased their gasoline stocks 237.4 per cent with a 27.9 per cent increase in gasoline output. In an endeavor to take care of their high current output and reduce their inventories, this group of refiners has been quoting gasoline at low prices outside their normal marketing territory.

Another significant feature lies in the California situation. Refiners in that State increased their gasoline output 37 per cent over the first five months of last year. They kept their output moving to the trade, however, and their stocks on May 31 were 8 per cent less than on the same date last year. This California gasoline has become an increasingly important factor in eastern markets since the first of June.

Another development which merits the consideration of Mid-Continent refiners is the 24.2 per cent increase in gasoline output of Indiana and Illinois refiners including western Ohio and Michigan. These refiners with the freight advantage of being within the consuming territory are the direct competitors of the Mid-Continent group. With an increase in output which far exceeds the increase in consumption these Middle West refiners are taking business which last week went to Mid-Continent refiners.

Gasoline and Naphtha

Most of the larger refiners in Oklahoma continued to quote 8½ cents to the trade for U. S. Motor gasoline through Monday. Tuesday morning one of the largest refiners in the State announced a quotation of 8 cents and this lead was quickly followed by other companies. It was impossible on Tuesday to determine just what effect this new quotation would have on other companies who have been quoting one-half to 1-cent a gallon under the larger refiners.

Those selling at the low of the market state that material is available at lower prices from a few refiners in West Texas and the Middle West. Sales of West Texas gasoline at 7 cents were reported last week. The latest decline in gasoline prices is expected to bring a "show down" in West Texas soon. The situation for the skimming plant has been unfavorable since the crude advance in May. With lower gasoline prices it is believed that a few plants will be forced to shut down and await lower crude oil prices. The same situation applies to a few plants in other parts of the Mid-Continent.

The 390 and 375 endpoint gasoline is freely offered exporters at the Gulf Coast contract basis. This contract price is now 7¾ cents for the 390 endpoint material and 8 cents for 375. These prices are f.o.b. North Texas which means 7⅝ cents for 390 and 7⅞ cents for 375 in Oklahoma. So far as known exporters are not taking on any additional contracts. A little spot buying on this basis was reported. The 50-52 450 endpoint naphtha dropped below 8 cents on Tuesday following the reduction in the U. S. Motor price.

Kerosene and Distillate

The 41-43 water white grade of kerosene was available on Monday and Tuesday at a price range of 5¼ to 5½ cents which is one-quarter cent under the price range a week ago. The higher gravity grades were also reduced. Nothing special developed during the week in distillates. A few refiners are storing for the winter season rather than attempt to force sales at this time.

Natural Gasoline

With no improvement in refinery gasoline shipments there has been no change in the slow demand for natural gasolines. The A and AA grades were offered freely at a low of 6¼ cents on Monday and Tuesday. The remaining grades were bringing a low of 5¾ cents. Shipments were slow at these prices.

Fuel Oil and Gas Oil

There was no change in the fuel oil and gas oil situation. There is some selected buying coming from the Middle West. In gas oil these buyers are seeking a product under 30 cold test of good color and odor. Sales as high as 2¾ cents for this product are reported. The ordinary grades were selling at 2⅝ to 2½ cents.

Refiners have not reduced their fuel oil prices and in few cases they have been able to advance their quotations 2½ cents per barrel. Should some of the West Texas refiners be forced to shut down, Oklahoma refiners believe the demand for North Texas, Oklahoma and Kansas fuel will improve.

Lubricants and Distillate

The slump in Pennsylvania and East Coast steam refined and bright stock prices coupled with the reduction on Tuesday in Pennsylvania crude oil prices indicates that Oklahoma cylinder stocks will not be further advanced. Prices were steady during the past week. More inquiries for wax are reported with no change in prices.

WORLD AUTO REGISTRATION

Total world registration of automobiles January 1, 1929, was 32,028,584, as against 29,687,499 on July 1, 1928, and 27,650,267 on January 1, 1927, according to the world census of motor vehicles just issued by the Department of Commerce. Of the total automobiles on the first of the year 27,007,965 were passenger cars, 4,702,950 were trucks and 317,669 buses.

Ratio of passenger cars registered in the United States to the population the first of 1929 was 5.6 per cent or 179 cars per 1,000 persons. For the entire world there was one car to every 70 persons or 14 cars per 1,000 persons.

Percentage of increase of passenger cars in the United States January 1, 1929, against January 1, 1928, was 5.6 per cent. The percentage for the entire world was 7.3 per cent or 1.7 per cent more rapid than the increase for the United States.

Of the world's total registered passenger cars 79.32 per cent are in the United States, the census shows. Of the world's total automobiles 76.90 per cent are in the United States.

Total registered automobiles in the United States at the first of the year was 24,629,921, the census shows. By countries the United Kingdom came second with 1,318,169 motor vehicles, France third with 1,098,000, Canada fourth with 1,061,830, Germany fifth with 531,000, Australia sixth with 516,690 and Argentina seventh with 310,695.

DEUTSCHE PETROLEUM

Deutsche Petroleum A. G., majority control of which lies with the Deutsche Erdoel A. G. and minority shares of which are owned by the Ruetgers-Werke, will pay a dividend of 4 per cent on 1928 operations, report of Trade Commissioner W. T. Daugherty, Berlin, to the Department of Commerce states. The payment will be assisted by balances carried forward from past years when no dividends were paid.

Depag's chief holding, Olex Deutsche Petroleum, distributing for the combination, has extended its agreement with Anglo-Persian Oil Co., which has further invested in Olex shares, the first investment being 40 per cent of the Olex shares and the recent acquirement being 35 per cent additional.

Crude oil production in Germany in 1928 was at about its 1927 level, 96,000 metric tons. Prices for mineral oils declined and railroad freight rates were less favorable than before the war, the company reported.

V.O.C. PRODUCTION

Venezuela Oil Concessions, Ltd., produced 121,301 metric tons of crude oil in the week ended July 6, compared with 121,253 metric tons in the previous week.

SUMMARY OF STATEMENTS MADE JULY 10, 1929, RELATING TO BUSINESS OF VARIOUS PIPE LINES FOR MONTH ENDED JUNE 30, 1929

	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
Nat. Transit	691,399.07	249,968.12	943,003.70	525,961.70	768,570.71
S. W. Pa. P. L.	535,525.28	92,002.02	1,010,730.49	443,209.38	592,255.37
Eureka P. L.	1,214,331.14	352,969.84	463,731.26	249,279.44	580,558.37
Buckeye P. L. (Macksburg)	462,009.23	319,202.71	117,475.37	192,141.28	251,854.51
Buckeye P. L. (Lima, etc.)	2,088,348.18	129,902.81	2,382,009.69	1,574,302.18	767,495.47
Buckeye P. L. (Cleveland)	50,131.07	11,542.95	55,365.58	2,429.40	68,505.76
Indiana P. L.	542,191.55	6,724.29	2,657,532.32	1,380,019.54	1,250,463.50
Cumberland P. L.	539,241.87	171,863.19	.....	218,131.40	.....
Southern P. L.	471,032.50	.....	304,677.09	86,743.09	233,158.70
N. Y. Transit	256,751.69	30,739.37	242,874.06	250,768.40	.....
Northern P. L.	332,496.47	.....	413,245.07	160,597.19	327,661.38
Tuscarora Oil	264,796.11	.....	.....	.....	623,857.21
Total June 30	7,448,254.16	1,364,915.30	8,590,644.63	5,083,583.00	5,464,380.98
Total May 31	7,411,330.35	1,440,187.53	8,198,395.04	5,160,386.46	5,269,173.61
Difference	36,923.81	75,272.23	392,249.59	76,803.46	195,207.37

GRAVITOMETER IS NEW GEOPHYSICAL INSTRUMENT OPERATED BY GRAVITY

By B. D. Stevenson

SAN ANTONIO, Tex., July 13.—M. S. Blackburn, of San Antonio, Tex., is the inventor of another geophysical instrument, a picture of which is shown herewith, Mr. Blackburn standing beside it. Gravity is the factor that operates in the use of this device, the gravitometer, upon which Mr. Blackburn has received a patent. The scientific principles upon which the instrument operates are described by him as follows:

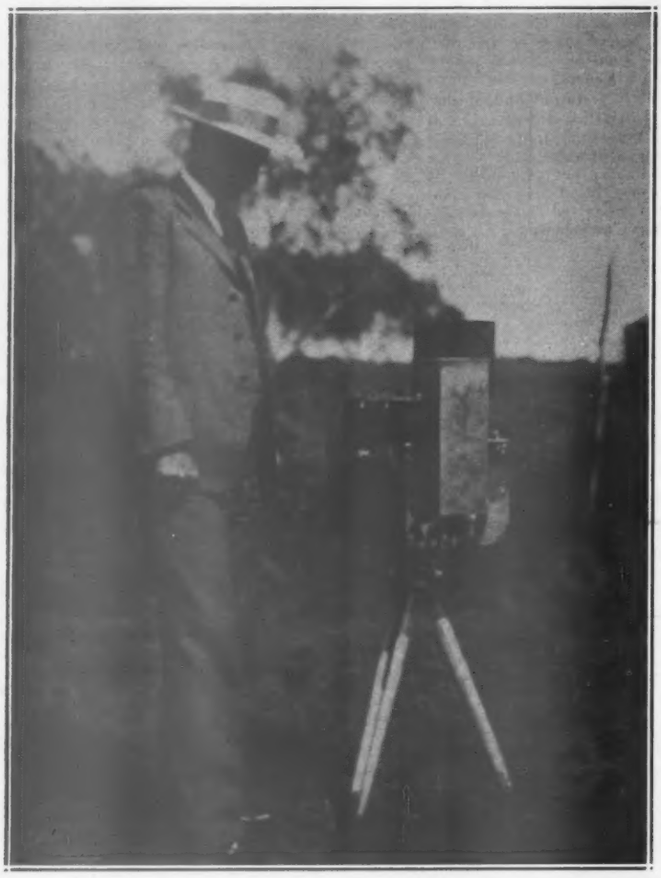
"Sir Henry Crooks of England, some 40 years ago, invented an instrument known in the scientific world as a radiometer, consisting of a vacuum tube in which were mounted four small square vanes on an upright needle. He discovered that when these were blackened on one side so as to absorb light and heat waves a molecular action was set up inside the tube that caused the vanes to revolve.

"In measuring the extremely small anomalies of gravity it is necessary to use an instrument whose forces are in the order of the anomalies of gravity themselves in order to obtain determinations of a sufficient magnitude to be recognized; and since science knew that the energy being consumed in the rotary motion of the radiometer was in this order it became evident that if the temperature and the light source were confined in a case arrangement that would exclude all other energies, it should, according to laws of physics, show a difference in the rate of rotation whenever there was a change in gravity.

Changes Occurred as Expected

"This theory was tested out under rather crude conditions at first and it was found that the expected changes really did occur and from this point the present gravitometer has been developed.

"In addition to actual field experience the mathematics of the radiometer has been worked out. The actual force manifested inside the vacuum tube is rather involved from a mathematical standpoint.



Gravitometer and its inventor, M. S. Blackburn.

However, it has been determined by Loeb, Milliken, E. Einstein and others that this force is approximately .02 of a dyne per square centimeter one free mean path back from the edge of the vanes. The area thus being acted upon is very small and the back action of the residual gas inside the vacuum tube, together with a friction on the needle point, caused by the weight of the revolving system itself, constitutes the action absorbing the energy of the light stream. Now, whenever the light stream is in excess of these energies the vane system revolves and if the light stream is held constant this rate of rotation will remain constant, provided there is no change in gravity.

"In actual field work the gravitometer is set up at a datum station and the rate of rotation of the revolving system determined at that station. The instrument is then moved to another station two-tenths to three-tenths of a mile distant and the rate of rotation again determined by a stop watch.

"If gravity is lighter at the second station than it was at the datum station the revolving system, that is the rotation of the vanes for any given number, will have increased. In other words, the time required to make 32 vanes pass the observation point will have required less time than it did at the datum station. Therefore, there was less gravity. Now had the time period for a given number of vanes to pass the observation point been longer than it would have been at the datum station then gravity would have increased at the second station.

"Under ordinary conditions a station can be made in 15 to 20 minutes, which includes the setting up, taking five observations and moving to the next station.

"The operation of the instrument requires only the closest observation of the control of the electrical circuit, together with exact determination of the rate of rotation of the vanes. Vibration, due to the passing of heavy vehicles, automobiles, trucks, etc., heavy winds, trains, or any other source of earth tremors, will show slight variations in the rate of rotation, but these variations as a rule are not sufficiently large to interfere with the general survey, and in practice we allow a variation of two-tenths to three-tenths of a second, which we feel covers any personal equasion in the reading of the vanes, together with any exterior vibration that might cause these slight anomalies."

PERSIAN OIL EXPORTS

Exports from Persia during the year ended March 31, 1929, included 10,672,982 bbls. of crude oil, 3,140,000 bbls. of gasoline in bulk and 9,188 bbls. in cases, 1,724,463 bbls. of kerosene in bulk and 15,343 bbls. in cases, and 13,658,907 bbls. of lubricating oils, according to report of Consul Augustin W. Ferring to the Department of Commerce.

The report states the decline in exports of heavy oils, the large increase in crude kerosene and smaller increases in refined kerosene and gasoline, reflect the progress of the Anglo-Persian Oil Co.'s refineries at Baden, which now are not only exporting refined oils but are competing vigorously in the Persian domestic market with the Persazneft, the Russian Soviet administration in Persia, which brings gasoline and kerosene from Baku.

SPAIN AND STANDARD OIL

Agreement between Standard Oil Co. of New Jersey and the Spanish government, whereby a satisfactory system of reimbursement for oil properties worth $30,000,000 which were seized by the Spanish monopoly is to be worked out, is about to be signed. Decree authorizing seizures of two Standard plants at Valencia and Alicante, one at Malaga, largely American owned, and properties of British, French and Dutch-Shell interests, became effective January 1, 1928. Negotiations for compensation have been conducted for the last 18 months.

ILLINOIS GASOLINE TAX

CHICAGO, July 13.—The new gasoline tax measure in this State requires that the dealer pay the tax on all gasoline in storage when the tax takes effect on August 1, a little more than two weeks from today. Dealers in consequence are seeking to reduce the quantity of gasoline in storage to the lowest possible amount and this will have some effect on dealer buying in this State, between now and August 1.

NEW SPARTAN OFFICIALS

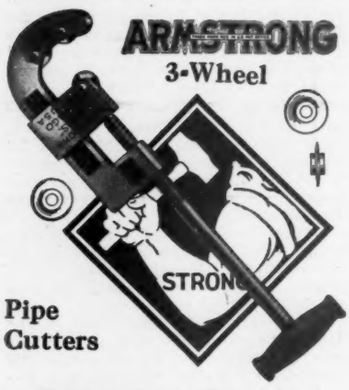
Announcement has been made by W. G. Skelly, chairman of the board of Spartan Aircraft Co. and president of Skelly Oil Co., of the appointment of Lawrence V. Kerber, chief of engineering section, air regulations division, aeronautics branch, United States Department of Commerce, as president of Spartan Aircraft Co., effective July 15. At the same time announcement was also made of the appointment of Rex B. Beisel, until recently chief designer of the Curtiss Aeroplane & Motor Co., as vice president in charge of engineering, effective July 10.

RETURNS TO OIL BUSINESS

CHICAGO, July 12.—John A. Anderson, formerly of Anderson & Gustafson, was one of the organizers of the new Paramount Petroleum Co., of 5149 North Clark Street, this city. Mr. Anderson plans to resume a more active connection with the oil business and will specialize on lubricating oils. The Paramount Oil Co. will have a station at the above address.

MEXICAN OIL EXPORTS

Exports of crude and refined oils from Mexico in May totaled 2,967,493 bbls., a gain of 603,217 over April but a decrease of 373,736 from May, 1928. Mexican Eagle Oil Co. (Royal Dutch Co.) was the largest shipper, with a total of 851,819 bbls., 121,423 more than the company shipped in April and 237,841 more than it shipped in May a year ago. Pan American Petroleum & Transport Co. was second with 827,505 bbls. for May, an increase of 140,916 over April but 279,411 less than the company's shipments in May, 1928.



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Savannah, Ga.
New Orleans (Gretna, La.)
Port Arthur, Texas
Galveston, Texas

Of Interest to Sales Departments

URGES DISTRIBUTION OF GASOLINE TAX FOLDERS

NEW YORK, July 15.—General and complete distribution of gasoline tax folders has been recommended to oil companies by President E. B. Reeser of the American Petroleum Institute. Speaking at a recent meeting of the Institute's board of directors, President Reeser said that already approximately 2,000,000 folders had been purchased by oil companies and placed in the hands of motorists in virtually every section of the United States.

The folders, designed to call attention to the menace of gasoline tax rate increases and diversion of tax revenue to other than highway purposes, were prepared by the Institute's Division of Public Relations. They are printed in sets of four and show the increases in tax rates, how such taxes have become tolls, reprint newspaper editorials on the subject and indicate the Institute's reasons for opposing high rates.

President Reeser explained that oil companies are distributing the folders not only through their filling stations, but by mail. Some are mailing them with dividend and royalty checks and invoices. Others are making distribution through employes and land office departments.

Support of several automobile organizations has been given the Institute in distributing the folders, notably by the National Automobile Dealers Association and the American Motorists Association, which have placed copies in their branch offices throughout the country. Other organizations are considering similar action.

PARIS OIL BURNER MARKET

One large manufacturer of oil burner equipment is investigating the possibilities of a market for his product in France. A survey of Paris had led to the conclusion that a large market could be developed in that city.

Paris office buildings, apartment houses and similar buildings to a large extent are now dependent on coal for heat. It is expected that a large supply of furnace oils will be available in the near future due to the building of new refineries in France. It is pointed out that after the gasoline and kerosene is extracted from the crude oil there will be only a small demand for the remaining products. The introduction of oil burner equipment would furnish a demand for the light and heavy distillates.

NOT TO GIVE BOND

CHICAGO, July 15.—Attorney General Corlstrom of Illinois has ruled that while the Department of Finance which will have charge of the collection of the gasoline tax of 3 cents a gallon which goes into effect in this state on August 1, may establish reasonable rules for the guidance and control of the gasoline distributors who will collect and account for the tax, the department is not authorized to require bonds. The Department of Finance had required that such a bond be given by each authorized distributor.

EXEMPT VIRGINIA TAX

WASHINGTON, D. C., July 15.—The Bureau of Internal Revenue in an opinion by its income tax unit states that it will hereafter allow purchasers of gasoline and other motor vehicle fuel in the State of Virginia to deduct the amount of said tax from their gross income for income tax purposes. This ruling revokes a part of a previous ruling by the bureau which held that the tax was deductible by the dealers only.

EVOLUTION OF PREMIUM GASOLINES COVERS LONG PERIOD IN MARKETING

The Lamp*

Whenever a motorist meets an oil man he is pretty sure to ask one or perhaps both of two questions which seem to be uppermost in the minds of all car owners.

His first question is this: "Did we not get better gasoline in the early days of the automobile than we are buying now, after you fellows have learned a lot more about refining?" And the second: "Is any of this high test or premium fuel worth the difference in price over regular gasoline?"

Both questions lead to the same explanation. The answer to them is in the affirmative. If the quality of gasoline be judged solely by its gravity reading, then it has declined rapidly in contrast to the growth and improvement of the motor car. Not all "high test" or premium fuels are worth the price asked for them, because some of them do not qualify for the designation given them by the sellers. Those which have a low knock rating not only are worth the premium charged, but in many cases actually work out for cheaper transportation on a per mile basis.

While it is true that the gasoline itself was of much higher quality 20 years ago, it is not true that it delivered better service than the gasoline of today, and after all, that is what interests the motorist and his pocketbook. The fact is, that if he got today the kind of gasoline we had in 1905, his automobile would develop what is known as a "gas lock."

It is quite worth while looking back over two decades to see what changes have been worked both in the automobile and in the petroleum industries, without which we could not have emerged from the horse-and-buggy era. The gasoline engine is still a new thing, in point of time. It was originally developed to automotive use on a diet of what would be called today a "premium fuel," which was much lighter in gravity than any which can be purchased at a filling station.

High Gravity Gasoline

Old timers remember that in the early days of the oil industry the business of a refinery was the manufacture of kerosene. A certain amount of gasoline had to be produced, but it was in the nature of a by-product which was difficult of disposal. The pioneers in the gasoline engine field were able to work with an ample supply of the by-product which was inexpensive. After cutting out of his runs all of the low boiling fractions that had to be removed to make kerosene safe for the old fashioned lamps, there was left a gasoline by-product of very light gravity with a low endpoint and high volatility.

The gasoline of the days from 1895 to 1905 had a Baume gravity reading around 77 degrees, and contained such a small amount of the higher boiling fractions that it became completely gassified when delivered into the carburetors of the early motors. Engines with cylinder pressures running up to 95 pounds per square inch were developed on this light fuel.

No doubt the abundance and cheapness of this high grade gasoline had a great deal to do with getting the automotive industry started. Those were the days of the surface puddle type carburetors, magneto ignition and strong right-arm starters.

With all the trouble the owners of the early model cars fell heir to, from short lived tires, chain drive, inefficient spark plugs and imperfect lubrication, it seems more than probable that the necessity of working on a poor gasoline would have proved the final handicap to anything approaching satisfactory operation, and would therefore have greatly retarded the demand for the horseless carriage. But with all their drawbacks, the cars did run, if somewhat briefly and irregularly, and enough of a buying demand set in to encourage the builders to apply their engineering skill to refinements and improvements of the body, chassis and running gear. There was practically no change made in the engine itself until

(Continued on Page 172)

*Standard Oil Co. of New Jersey.

Who's Who
IN PETROLEUM REFINING AND MARKETING

By C. O. Willson

The present Pure Oil Co., which originally was a natural gas company within a period 15 years has become one of the strong independent refining and marketing units of the oil industry. Its refining and marketing facilities are scattered over a wide territory so that the company occupies a strong position for further expansion.

The present company name was adopted in 1920. Previously it had operated under the name of the Ohio Cities Gas Co. When operating under that name in 1913 the company found oil while drilling for natural gas to provide gas for its public utility properties. Starting at that time its oil operations gradually expanded with the construction of a refinery at Cabin Creek, W. Va., and later a plant at Heath, Ohio. In 1917 the company purchased the marketing properties of the Pure Oil Co. of New Jersey and in 1920, this name was officially adopted for the present organization.

For several years the company's operations in producing, refining and marketing were confined to the eastern part of the United States. In recent years the operations have been expanded to include the Mid-Continent area with production holdings in California and South America.

The company at present owns and operates the following refineries:

Plant location—	(*)
Oklahoma	
Ardmore	2,500
Muskogee	8,000
Ohio	
Heath	5,000
Pennsylvania	
Marcus Hook	17,000
Texas	
Smiths Bluff	30,000
West Virginia	
Cabin Creek	3,000
Total capacity	65,500

*Daily crude oil capacity (bbls.).

The Muskogee and Marcus Hook refineries are practically complete in their operations, manufacturing lubricants and wax as well as the light oil products. The Cabin Creek refinery operates exclusively on Cabin Creek crude, a Pennsylvania grade of oil from which the company secures a large yield of premium motor oils sold under the trade name of "Tiolene."

The company in recent years has shifted its refinery operations somewhat. Two plants were abandoned, one new plant built and all of the older plants modernized and enlarged.

Market Outlets

The company owned marketing facilities of the Pure company are found east of the Mississippi River, extending to practically every state in that area. The Marcus Hook and Smiths Bluff refineries furnish the products for the coastal distribution which extends from Maine to the Gulf Coast. The Middle West distribution is supplied to a large extent by the Oklahoma refineries while the Ohio and West Virginia refineries serve the territory between the coast and the Middle West.

Most of the company owned facilities are operated under the name of the Pure Oil Co. During the past few years, however, in the Southeast, the company has acquired large independent jobbing properties and in some cases the company name has not been changed. These subsidiary companies include the Wofford Oil companies of Georgia and Alabama, the Sherrill Oil Co. and the American Oil Co. These companies are large distributors in Georgia, Florida, Alabama and Mississippi. The Pure company maintains large ocean terminals along the East Coast to serve these companies and other Pure oil marketing properties. The ordinary grade of gasoline is sold under the trade name of Purol with a premium grade known as "Detonox."

In the past two years the company has either installed or is now building units of what is known as the Gyro cracking process. This process gives a large yield of gasoline which is exceptionally high in antiknock value. The company sells this output as a premium product.

The company's crude oil supplies for its refineries to a large extent come from its own producing leases connected to the plants with company owned pipe line facilities. The company has several natural gasoline plants in Oklahoma. The intercoastal movement of crude oil and refined products is transported in the company's fleet of tankers and barges.

CONTINENTAL TO HAVE LARGE GASOLINE SALES

The 10 leading companies in May sold 13,908,434 gallons of gasoline, according to data based on gasoline tax collections. This gallonage was approximately 40 per cent of the total gallonage in the state.

The Magnolia Petroleum Co. continues to be the leading distributor in the State with a gallonage of 2,589,778 gallons in May. The recent merger of the Marland Refining Co. and the Continental Oil Co., however, will mean in the future that the Continental Oil Co. will be the largest distributor in the State, provided the merged company can maintain the gallonage of the two companies.

The following table gives the May gasoline gallonage of the leading marketing companies:

Company	Gallons
Magnolia Petroleum Co., Oklahoma City	2,589,778
The Texas Company, Oklahoma City	2,316,626
Marland Refining Co., Ponca City	2,042,771
Pierce Petroleum Corp., Tulsa	1,598,896
Continental Oil Co., Tulsa	1,248,938
Barnsdall Oil Co., Tulsa	928,291
Cities Service Co., Tulsa	881,572
Champlin Refining Co., Enid	749,033
Transcontinental Oil Co., Tulsa	835,566
High Test Oil Corp., Oklahoma City	516,958
Total	13,908,434

15 Cents Less Per Barrel

is the difference between the posted price of Pampa crude, and Mid-Continent crude of same gravity.

WE OFFER 39 TO 43 GRAVITY

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Less than .003 sulphur

ATTENTION REFINERS

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THE CONTINENTAL WELL SUPPLY CO.
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New York

TITUSVILLE FORGE COMPANY
TITUSVILLE, PENN.

NEW LOCATIONS

(Continued from Page 108)

feet west of the SE cor., Section 20, Block 34, Township 2s, T.&P. Survey.

Howard County

Cranfill & Reynolds' No. 2 Kloh-Rumsey, 953 feet north and 243 feet east of the southwest corner of their lease out of the S half, Section 3, Block 32, Township 2s, T.&P. Survey. Howard County Oil Corp.'s No. 3 Kloh and others, 990 feet south and 330 feet east of the NW cor., Section 5, Block 32, Township 2s. T.&P. Survey. Laurel Oil Co. and Cosden Oil Co.'s No. 12 Dora Roberts, 2,490 feet north and 1,110 feet west of the SE cor., Section 136, Block 29, W.&N.W. R.R. Survey. Moody Corp.'s No. 17 Dora Roberts-E, 2,440 feet south and 1,780 feet west of the NE cor., Section 136, Block 29, W.&N.W. Survey. Same corporation's No. 18 Dora Roberts-E, 2,490 feet south and 450 feet west of the NE cor., Section 136, Block 29, W.&N.W. Survey. Plymouth Oil Co.'s No. 4 Kloh and others, 330 feet south and 1,650 feet east of the NW cor., Section 5, Block 32, Township 2s, T.&.P. Survey. Simms Petroleum Co.'s No. 1 H. R. Clay, 330 feet north and 2,310 feet east of the SW cor., Section 127, Block 29, W.&N.W. Survey.

Jack County

Llewellyn & Knight's No. 2 Oliver Loving, 330 feet south and west of the NE cor. of Section 2,735, T.E.&L. Survey, A-776. P. Shabay ond others' No. 1 Oliver Loving, 1,701 feet south and 229 feet east of the NW cor. of the west 65 acres of Section 2,746, T.E.&L. Survey, A-688.

Jones County

Roeser & Pendleton,Inc.'s No. 5 J. H. Grayson-A, 945 feet south and 990 feet west of the NE cor. of their lease out of Section 13, Block 19, T.&P. Survey. The Texas Company's No. 4 W. E. Camp, 200 feet north and west of the SE cor. of W. E. Camp. 189.5-acre tract out of Section 13, Block 19, T.&P. Survey.

Montague County

Bridwell Oil Co.'s No. 3 Mrs. E. C. Edmondson, 300 feet north and 450 feet west of the southeast corner of the north 15 acres of E. C. Edmondson's 96.5-acre tract out of T. R. Edmondson Survey, A-222.

Bridwell Oil Co.'s No. 2 Mrs. E. C. Edmondson, 65 feet north and 150 feet west of the SE cor. of the north 15 acres of the Mrs. E. C. Edmondson 96.5-acre tract out of the T. R. Edmondson Survey, A-222. Farlyn Oil Co.'s No. 1 R. W. Cunningham and others-A, 1,050 feet south and 1,350 feet east of the NW cor. of the L. B. Norton Survey, A-574, being 1,050 feet south and 150 feet east of the NW cor. of their 61.08-acre lease.

Scurry County

Camp Springs Oil & Refining Co.'s No. 2 J. O. Guinn, 1,300 feet north and 300 feet west of the SE cor., Section 12, Block 3, H.&T.C. Survey.

Pecos County

Humble Oil & Refining Co.'s No. 7 Mrs. M. A. Smith-B, 275 feet north and 2,679 feet east of the SW cor., Section 101, T.C.R.R. Survey. Mid-Kansas Oil & Gas Co.'s No. 2 Yates-E, 1,355 feet south and 280 feet east of the NW cor., Section 59, Block 1, I.&G.N. Survey. Perren and others' No. 1 Louis Peterson, 150 feet northeast of the southwest line and 150 feet southeast of the northwest line of Section 34, Block 10, H.&G.N. Survey. Phillips Petroleum Co.'s No. 2 Monroe, 990 feet south and west of the NE cor., Section 39, Block 194, C.C.&S. F. Survey. Same company's No. 3 T. M. Ramsey, 2,722 feet south and 990 feet west of the NE cor., Section 17, Block 194, G.C.&S.F. Survey. Shell Petroleum Corp.'s No. 11 Mrs. M. A. Smith, 330 feet south and 3,060 feet west of the NE cor., Section 27, Block 194, G.C.&S.F. Survey. Sun Oil Co.'s No. 1 University Land-B, 475 feet north and 1,680 feet west of the SE cor., Section 36, Block 18, University Land. Taylor-Link Oil Co.'s No. 2 University, 330 feet south and east of the NW cor., Section 31, Block 16, University Land. California Co.'s No. 19 Yates, Lease 1, 1,042 feet south and 919 feet west of the NE cor., Section 34, Block 194, G.C.&S.F. Survey.

Shackelford County

Amerada Petroleum Corp.'s No. 1 E. E. Whitney, at the C of Section 515, T.E.&L. Survey. Big State Oil Co.'s No. 8 Russ-Webb, 495 feet north and 150 feet east of the SW cor. of Section 17, Block 11, T.&P. Survey. Cranfill & Reynolds' No. 1 C. Flippin-G, 1,470 feet south and 150 feet east of the NW cor. of Section 35, Block 11, T.&P. Survey. Gibson & Johnson's No. 1 C. E. Bowman, 1,390 feet north and 150 feet east of the SW cor. of Section 60, Block 12, T.&P. Survey. Gilman & McMurray's No. 4 J. B. Matthews, 794 feet south and 487 feet east of the middle of the east line of Section 29, and located in Section 2, Block 10, E.T.R.R. Survey, being 480 feet south and 487 feet east of the NW cor. of their 80-acre lease. F. W. Holder's No. 1 I. N. Jackson, 150 feet south and east of the NW cor. of the east 16 acres of the south 32 acres of the SE of Section 85, Block 12, T.&P. Survey. Manning and others' No. 4 W. P. Newell, 450 feet north and east of the SW cor. of the west 100 acres of the northeast 200 acres of Section 11, Block 11, T.&P. Survey. John L. McMeans' No. 1 L. D. Crow, 150 feet south and west of the NE cor. of the south 50 acres of the west 100 acres of Section 1,530, T.E.&L. Survey. John McMean's No. 2 T. J. Crow, 150 feet south and west of the NE cor. of the south 50 acres of the west 100 acres of Sec. 1,531, T.E.&L. Survey. Prairie Oil & Gas Co.'s No. 1 J. B. Matthews, 450 feet south and 150 feet west of the NE cor. of the N half of the SE of Section 29, Block 10, E.T.R.R. Survey. Roeser & Pendleton's No. 13 Cook-A, Section 62, 1,663 feet south and 220 feet east of the NW cor. of the SW of Section 62, Block 10, E.T.R.R. Survey. Sedgwick Oil & Gas Co.'s No. 1 Morris & Buie, 150 feet south and west of the NE cor. of the SW of Section 200, Block 10, E.T.R.R. Survey. F. E. Shaheen and others' No. 1 E. E. Whitney, 1,000 feet south and 150 feet east of the NW cor. of the E half of the SW of Section 8, S.P.R.R. Survey.

F. E. Shaheen and others' No. 2 E. E. Whitney, 150 feet south and 278 feet west of the SW cor. of S.P.R.R. Survey No. 8, and located in W. Leahey Survey. Simms Petroleum Co.'s No. 1 J. F. Dyer, 800 feet north and 200 feet east of the SW cor. of the SE of Section 63, Block 11, T.&P. Survey. Vacuum Oil Co.'s No. 5 J. B. Matthews-C, 150 feet south and 480 feet west of the NE cor. of the NW of the SW of Section 29, Block 10, E.T.R.R. Survey. Vacuum Oil Co.'s No. 4 J. B. Matthews-C, 490 feet south and 150 feet west of the NE cor. of the NW of the SW of Section 29, Block 10, E. T.R.R. Survey.

Stephens County

Texas-Louisiana Power Co.'s No. 1 C. L. Hefley, 950 feet north and 240 feet west of the SE cor. of the NE of Section 68, Block 6, T.&P. Survey.

Throckmorton County

Shappell Oil Co.'s No. 3 Upshur County School Land, 450 feet south and 850 feet west of the northeast corner of Lot No. 27, Crittenden Subdivision, Upshur County School Land, A-825.

Ward County

Gulf Production Co.'s No. 6 G. W. O'Brien and others, 330 feet north and west of the SE cor. NE, Section 20, Block F, Gunter & Munson, Maddox Brothers & Anderson Survey.

Gulf Production Co.'s No. 2 Wristen Brothers, 1,546 feet northeast of the southwest line and 221 feet southeast of the northwest line of Section 18, Block 5, H.&T.C. Survey. Shipley and others' No. 2 S. F. Hayzlett, 220 feet northwest of the southeast line and 220 feet northeast of the southwest line of the northeast 80 acres of the southwest 160 acres of the southeast 320 acres of Section 17, Block 5, H&T.C. Survey.

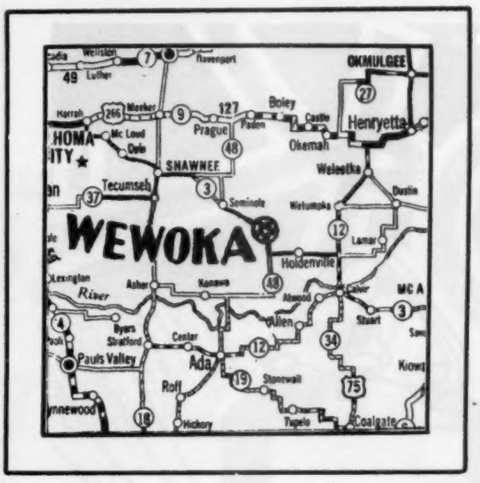
Wichita County

Aiken & Rayzor's No. 1 T. L. Burnett and others, 150 feet south and west of the northeast corner of the east 40 acres of the south 80 acres of the north 200

·WEWOKA·

The Wewoka Pool, discovered in May, 1923, by Mr. R. H. Smith with his wildcat test on the Foster Farm, NW-SW-NW Sec. 32-8-8, Seminole County, Oklahoma, opened the largest oil development in the history of Oklahoma, and a general high gravity oil territory which has not been equalled anywhere in the world. Following the Wewoka discovery a wildcat campaign of large proportions began, which resulted in the discovery of the Cromwell, Papoose-Gilcrease, Holm-Jarvis, Weleetka, Seminole, Carr City, East Seminole, St. Louis, Pearson, Asher and a dozen pools of small area in the counties of Seminole, Hughes and Pottawatomie which altogether have produced up to June 1, 1929, 424,615,147 barrels.

The general territory in this area, covering some 25 townships or more than a half million acres, will undoubtedly prove to be good oil country for many years, as it may be said that its possibilities are far from being known at this time.



J. K. GUINN
Store Manager at Wewoka

The field is not only rich in oil, but in wet natural gas from which a vast production of natural gasoline has been and is being extracted in many plants scattered through the extensive territory.

On July 1st, the entire territory growing out of the opening of the Wewoka field was producing 414,350 barrels from 2,881 wells, an average of 144 barrels per day per well.

JOSEPH REID GAS ENGINE COMPANY
Two and Four Cycle Gas Engines, Pumping Powers, Refinery Equipment

JOHN A. ROEBLING'S SONS COMPANY
Wire Lines and Welding Wire

ROSSENDALE-REDDAWAY COMPANY
"Camel Hair" and canvas stitched belting

WALWORTH COMPANY
Fittings and Valves for all branches of the oil industry

WHITLOCK CORDAGE COMPANY
Manila Cordage, including Drilling Cables, Bull Ropes, Cat Lines, etc.

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JONES & LAUGHLIN STEEL CORPORATION
Tubular Goods, Seamless and Lapwelded

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NATIONAL TRANSIT PUMP & MACHINE COMPANY
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Valves for the Oil Industry

FRICK-REID SUPPLY CORPORATION
COVERS THE FIELD WITH WELL MANAGED STORES FROM THE ROCKY MOUNTAINS TO THE ATLANTIC COAST
Pittsburgh ..... Tulsa

The Cement Head That had to be GOOD!

THE reputation of the Grant Underreamer for unfailing performance is too valuable to be jeopardized by an inferior product bearing the same name.

That is why every detail of the Grant Cement Head was tested over and over again before being offered to operators. You'll find the Grant Cement Head a good running mate to the famous Grant Underreamer.

Grant Oil Tool Co.

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"Lightning Change"
CEMENT HEADS

acres of the W half, Section 4, H.T.&B. Survey, A-752. Lee Bullington and Pendleton's No. 5 Grace Jennings, 155 feet north and 450 feet west of the SE cor., Section 12, H.T.&B. Survey, A-134. Golding, Cochran & Mahfield's No. 7 Waggoner Brothers, 150 feet north and east of the southwest corner of Lot No. 22, H. George Survey, A-454. W. H. Hammon's No. 1 S. I. and H. M. Munger, 150 feet north and 450 feet east of the southwest corner of Lot No. 9, Block 24, Kemp's Wichita Valley Lands. Humble and Hines' No. 3 J. L. and T. J. Waggoner, 1,572 feet south and 3,929 feet east of the northwest corner of M. A. Willis Survey, A-547.

E. R. Mount and others' No. 3 J. L. and T. J. Waggoner, 150 feet north and 450 feet west of the southeast corner of Lot No. 10, H. George Survey, A-454. Riner & Bailey's No. 8 Mrs. Nora Michie-A, 450 feet north and 765 feet east of the southwest corner of their 39.8-acre lease out of L. Netherly Survey, A-250. Same parties' No. 5 N. Mitchie-B, 150 feet north and 1,350 feet east of the southwest corner of Mrs. Nora Michie's 104.5-acre tract out of L. Netherly Survey, A-240. T. F. Hunter's No. 4 J. L. and T. J. Waggoner-C, 350 feet south and 767 feet east of the northwest corner of H. George Survey, A-454. J. G. Rowe and others' No. 4 J. L. and T. J. Waggoner, 450 feet south and 150 feet west of the northeast corner of Lot No. 13, Section 2, G.C.&S.F. Survey, A-772. The Texas Company's No. 3 C. A. Mangold, 645 feet north and west of the southeast corner of Lot No. 37, Mangold Subdivision, P. Castleman Survey, A-35. Ven-Mex Oil Co. and Hines' No. 1 J. L. and T. J. Waggoner, 150 feet south and east of the northwest corner of Lot 4, Section 2, G.C.&S.F. Survey, A-772.

Continental Oil Co.'s No. 1 A. F. Dodson-A, 206 feet south and 1,850 feet west of the NE cor. of the L. Hornsby Survey, A-97. Melat, Graham & Christie's No. 1 W. H. Chilson, 150 feet north and west of the SE cor. of the north 30 acres of the east 80 acres of Section 9, League 4, Denton County School Land, A-417. Stump, Melat & Grisham's No. 1 R. L. Crudup, 1,049 feet south and 150 feet east of the NW cor. of Section 10, League 4, Denton County School Land, A-417. Continental Oil Co.'s No. 14 T. L. Burnett-E, 710 feet south and 592 feet east of the NW cor. of the S half of the SE of the NW of Section 2, T.& N.O. Survey, A-506. Fain-McGaha Oil Corp.'s No. 1 Charles Pettit, 2,000 feet north and 1,300 feet west of the SE cor. of Section 20, Block 7, H.&T.C. Survey, A-786. Golding, Cochran & Mayfield's No. 6 J. L. and T. J. Waggoner, 150 feet north and 474 feet east of the SW cor. of Lot 22, H. George Survey, A-454. W. H. Hammon and others' No. 3 J. H. and R. L. Bradley, 150 feet south and 2,400 feet east of the NW cor. of the S. Holloway Survey, A-497. Riner & Bailey's No. 1 Mrs. Nora Michie-A, 450 feet north and 465 feet east of the SW cor. of their 39.6-acre lease out of Nora Michie 104.6-acre tract out of L. Netherly Survey, A-240. Ryan Petroleum Corp.'s No. 109 G. L. Nance, 150 feet north and 2,700 feet east of the SW cor. of the Sam O. Fowler Survey, A-78. The Texas Company's No. 8 J. L. and T. J. Waggoner, 150 feet south and 475 feet west of the NE cor. of Lot No. 28, H. George Survey, A-454. United Production Co. and others' No. 1 S. I. and H. M. Munger-A, 150 feet south and east of the NW cor. of Block 31, Kemp's Wichita Valley Lands. Same company's No. 1 S. I. and H. M. Munger-B, 150 feet south and west of the NE cor. of Block 30, Kemp's Wichita Valley Lands.

Wilbarger County

J. B. Baker and others' No. 2 W. T. Waggoner-H, 150 feet south and east of the NW cor. E half SW, Section 22, Block 4, H.&T.C. Survey. Barkley & Meadows' No. 9 W. T. Waggoner-C, 866 feet north and 856 feet east of the SW cor., Section 5, Block 5, H.&T.C. Survey. Barkley & Meadows' No. 10 Waggoner-C, 868 feet north and 256 feet east of the SW cor., Section 5, Block 5, H.&T. C. Survey. L. G. Bradstreet Co.'s No. 2 Waggoner-B, 150 feet north and east of the SW cor. NW SE, Section 42, M.E. P.&P. Survey. Easter Oil Co.'s No. 6 Waggoner-A, at the C NE NE, Section 26, Block 4, H.&T.C. Survey. Empire Gas and Fuel Co.'s No. 17 Waggoner-B, 371 feet north and 205 feet west of the SE cor. NE SW, Section 32, Block 4, H.&T.C. Survey. Empire Gas & Fuel Co.'s No. 18 Waggoner-B, 205 feet north and west of the SE cor. SW, Section 32, Block 4, H.&T.C. Survey. Same company's No. 10 Waggoner-C, 1,015 feet south and 268 feet east of the NW cor., Section 25, Block 4, H.&T.C. Survey. Empire Gas & Fuel Co.'s No. 11 Waggoner-C, 768 feet south and 762 feet east of the NW cor., Sec. 25, Block 4, H.&T.C. Survey. E. W. Marland Co., Inc.'s No. 1 L. A. Foster, 150 feet north and east of the southwest corner of the south 150 acres of L. A. Foster's tract out of W. S. Carlson Survey, A-1,924. Staley-Wynne & Co.'s No. 1 Waggoner-E, 205 feet south and west of the NE cor. SW NE, Section 25, Block 4, H.&T.C. Survey. The Texas Company's No. 10 Waggoner-E, 660 feet south and 205 feet east of the NW cor. E half NE, Section 25, Block 4, H.&T.C. Survey.

Winkler County

Cranfill and others' No. 2 E. G. Hutchings, 2,310 feet north and east of the SW cor., Section 47, Block 26, School Land. Humble Oil & Refining Co.'s No. 13 T. G. Hendrick-C, Lease 2, 440 feet north and 330 feet east of the SW cor., Section 10, Block B-12, School Land. Marland Production Co.'s No. 1 Tobe Morton-A, 330 feet south and west of the NE cor., Section 16, Block B-12, School Land. Southern Crude Oil Purchasing Co.'s No. 4 Hutchings-T-90, 2,310 feet north and west of the SE cor., Section 47, Block 26, School Land.

Young County

Bridwell Oil and Clark's No. 3 F. M. Cullers, 350 feet south and 850 feet east of the NW cor., Section 25, Young County School Land, A-1,284. Perkins & Butler's No. 2 J. W. Whitt, 150 feet south and east of the northwest corner of the east 30 acres of J. W. Whitt's 109-acre tract out of Section 160, T.E. &L. Survey. S. Southern and H. Gray's No. 1 F. M. Cullers, 150 feet north and 450 feet east of the SW cor. SE SW, Section 2, C.T.R.R. Survey, A-2,177. W. R. Stafford's No. 1 E. F. Brown, 150 feet north and east of the southwest corner of the east half of the south 70 acres of Section 290, T.E.&L. Survey. Trinity Oil Co.'s No. 1 F. Loftin, 200 feet south and west of the NE cor. SE NE, Section 2, C.T.R.R. Survey, A-2,152. Hines Oil Co. and others' No. 1 T. R. Criswell, 1,600 feet north and 300 feet west of the southeast corner of T. R. Reeder Survey, A-1,354.

Corrections

In Archer County: Jim Turner's No. 1 Belle Z. Lyles, 660 feet south and 660 feet west of the NE cor. NW SW, Section 2, S.P.R.R. Survey, A-1,231.

In Gray County: Gardner Brothers and Collins' No. 2 G. H. Saunders, 955 feet north and 330 feet west of the southeast corner of the west 68 acres of the east half of J. G. Eustis Survey, No. 1.

In Pecos County: Taylor-Link Oil Co.'s No. 1 University, 533.3 feet north and 1,040 feet east of the SW cor., Section 30, Block 16, University Land.

Harry Adams Oil Co.'s No. 1 University, 1,841 feet north and 1,077 feet west of the SW cor., Section 92, Block 194, G.C.&S.F. Survey, and located in Section 12, Block 17, University Land. Mid-Kansas Oil & Gas Co.'s No. 6 Mrs. M. A. Smith, 712 feet south and 1,444 feet west of the most easterly NE cor., Section 31, Block 194, G.C.&S.F. Survey.

In Shackelford County: Gibson & Johnson's No. 1 C. E. Bowman, 1,390 feet north and 150 feet east of the SW cor., Section 80, Block 12, T.&P. Survey.

In Wilbarger County: Empire Gas & Fuel Co.'s No. 11 Waggoner-B, 660 feet south and 205 feet west of the NE cor. SW, Section 32, Block 4, H.&T.C. Survey.

Lewis Production Co.'s No. 8 Waggoner-A, 660 feet south and 200 feet east of the NW cor. SW NE, Section 18, Block 4, H.&T.C. Survey.

"Deep-hole" Dependability

You Can Get It With NATIONAL A.P.I. Drill Pipe

After the first few thousand feet of hole is made, the real test comes. The operator's concern for successful progress naturally increases with greater depths—and it's right here that NATIONAL Drill Pipe shows its real worth. Deeper and deeper as the hole *goes down*—more and more the evidence *piles up* that NATIONAL is at its best in deep-hole work. The steady pounding and grinding away through slowly yielding strata, coupled with high speeds and greater weight of string—better serves to demonstrate the value of skillful manufacture, critical inspection and rigid tests back of this pipe. "Deep-hole" dependability is another reason naturally increases with greater depths—an dit's right here

Standard of America's Oil Fields

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Casing—Tubing—
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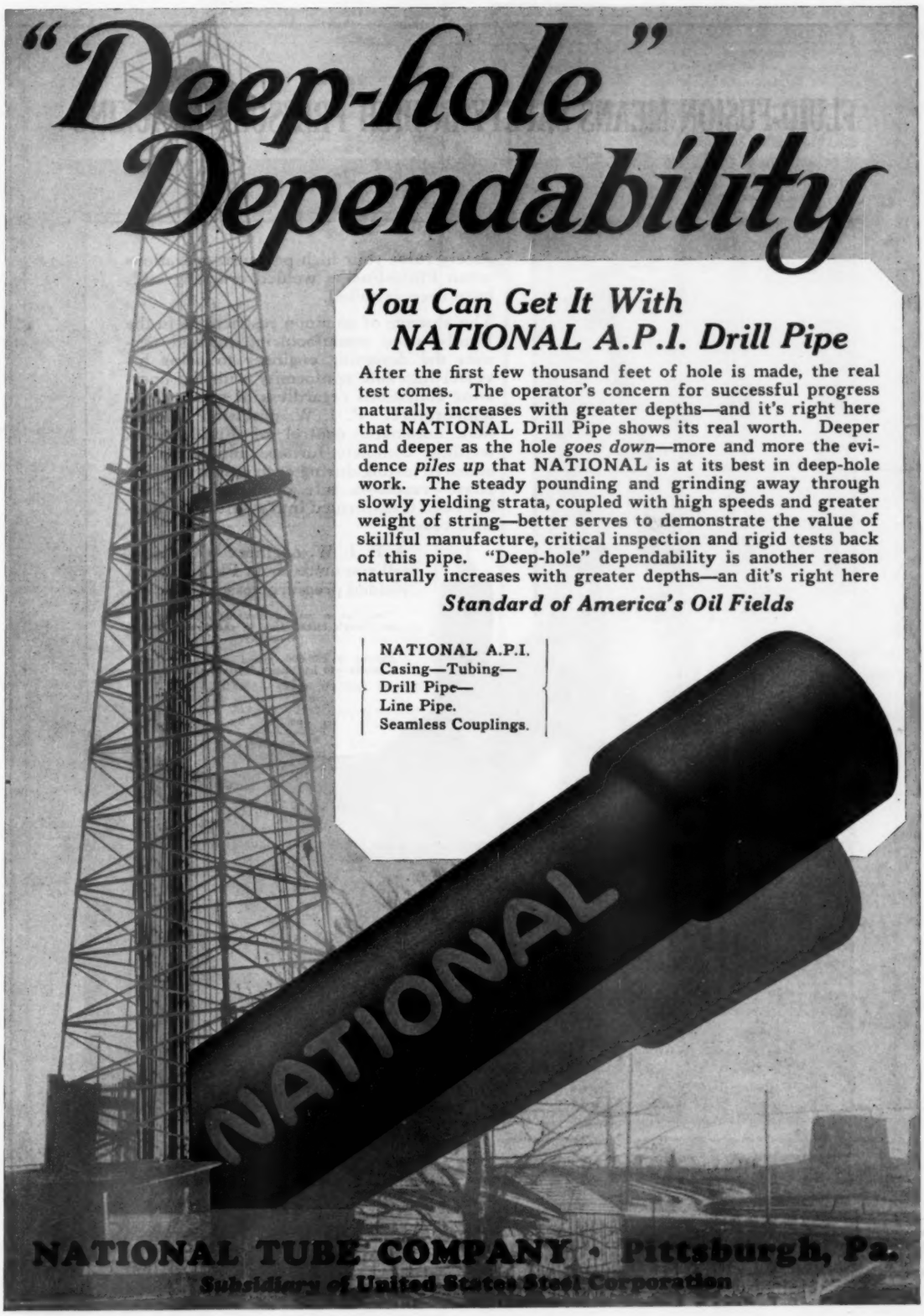
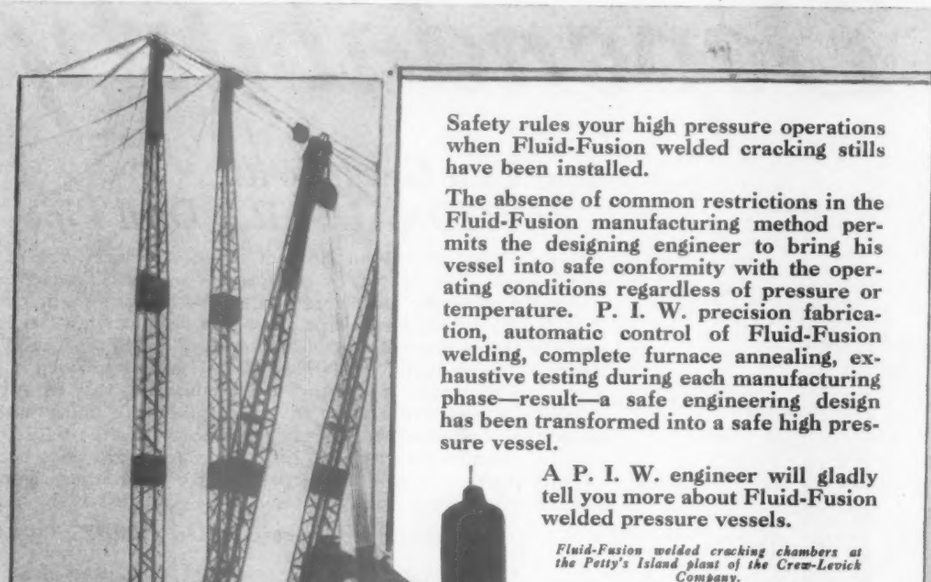


NATIONAL TUBE COMPANY • Pittsburgh, Pa.

Subsidiary of United States Steel Corporation

FLUID-FUSION MEANS SAFETY IN HIGH PRESSURE CRACKING



Safety rules your high pressure operations when Fluid-Fusion welded cracking stills have been installed.

The absence of common restrictions in the Fluid-Fusion manufacturing method permits the designing engineer to bring his vessel into safe conformity with the operating conditions regardless of pressure or temperature. P. I. W. precision fabrication, automatic control of Fluid-Fusion welding, complete furnace annealing, exhaustive testing during each manufacturing phase—result—a safe engineering design has been transformed into a safe high pressure vessel.

A P. I. W. engineer will gladly tell you more about Fluid-Fusion welded pressure vessels.

Fluid-Fusion welded cracking chambers at the Petty's Island plant of the Crew-Levick Company.

Raising a 230,000 pound vessel—10 feet diameter—40 feet long—3½-inch thick walls.

The PETROLEUM IRON WORKS COMPANY

SHARON PA.

P.I.W. STEEL PLATE CONSTRUCTION

NEW YORK CHICAGO TULSA

BUREAU OF MINES STATISTICS FOR MONTH OF MAY, 1929

ANALYSIS OF SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke, and asphalt in thousands of barrels of 42 U. S. gallons)

	May, 1929	April, 1929*	May, 1928	Jan.-May, 1929	Jan.-May, 1928
NEW SUPPLY:					
Domestic production:					
Crude petroleum:					
Light	76,009	71,799	67,770	304,076	323,652
Heavy	8,406	8,311	7,448	40,636	39,386
Total crude	84,415	80,110	75,218	404,712	363,038
Natural gasoline	4,243	4,264	3,471	20,650	17,138
Benzol	267	255	238	1,269	1,148
Total production	89,025	84,629	78,927	426,631	381,324
Daily average	2,872	2,821	2,546	2,825	2,509
Imports:					
Crude	7,552	7,828	6,766	37,261	31,453
Refined	2,732	2,634	1,163	8,647	6,197
Total new supply all oils	99,309	95,091	86,856	472,539	418,974
Daily average	3,204	3,170	2,802	3,129	2,756
Increase in stocks all oils	3,726	6,273	491	40,046	26,775
DEMAND:					
Total demand	95,583	88,818	86,365	432,493	392,199
Daily average	3,083	2,961	2,786	2,864	2,580
Exports†:					
Crude	1,932	1,726	1,493	8,880	6,801
Refined	10,925	10,357	13,014	53,306	57,386
Domestic demand	82,723	76,735	71,858	370,307	328,012
Daily average	2,668	2,558	2,318	2,452	2,158
Excess of daily average domestic production over domestic demand	204	263	228	373	351
STOCKS (end of month):					
Crude petroleum:					
East of California‡:					
Light	332,011	331,301	320,381	332,011	320,381
Heavy	47,531	49,405	51,588	47,531	51,588
California:					
Light	29,038	26,500	19,170	29,038	19,170
Heavy§	101,681	100,332	93,941	101,681	93,941
Total crude	510,261	507,538	485,080	510,261	485,080
Natural gasoline at plants	1,390	1,166	810	1,390	810
Refined products	141,878	141,099	130,492	141,878	130,492
Grand total stocks all oils	653,529	649,803	616,382	653,529	616,382
Days' supply¶	212	219	221	238	239
Bunker oil (included above in domestic demand)	4,704	4,179	5,013	21,263	21,058

*Revised. †Includes shipments to Alaska, Hawaii, and Porto Rico. ‡Exclusive of producers' stocks. §Includes fuel oil. ¶Grand total stocks all oils, divided by daily average total demand.

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (Barrels)

(From Bureau of Foreign and Domestic Commerce)

	May, 1929 Total	May, 1929 Dy.av.	April, 1929 Total	April, 1929 Dy.av.	Jan.-May, 1929	Jan.-May, 1928
Imports	7,552,000	243,600	7,828,000	260,900	37,261,000	31,453,000
From Mexico	1,281,000	41,300	1,113,000	37,100	4,293,000	6,642,000
From Venezuela	5,139,000	165,900	5,201,000	173,400	25,676,000	18,222,000
From Colombia	857,000	27,600	1,330,000	44,300	5,725,000	5,484,000
From other countries	275,000	8,900	184,000	6,100	1,567,000	1,105,000
Exports*	1,932,000	62,300	1,724,000	57,500	8,878,000	6,795,000
Domestic crude oil:						
To Canada	1,729,000	55,800	1,279,000	42,600	7,118,000	5,336,000
To other countries	203,000	6,500	445,000	14,900	1,760,000	1,458,000
Foreign crude oil	Not available					1,000

*No crude shipments to territories during May.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES (Barrels)

	May, 1929	April, 1929	Jan.-May, 1929	Jan.-May, 1928
Crude oil	95,000	.....	491,000	1,467,000
Refined products	1,583,000	2,248,000	10,169,000	7,648,000
Gasoline	1,498,000	2,110,000	8,716,000	5,700,000
Gas oil	79,000	133,000	1,369,000	1,082,000
Fuel oil	2,000	2,000	63,000	629,000
Lubricants	1,000	1,000	7,000	226,000
Asphalt	3,000	2,000	14,000	11,000

PRODUCTION OF CRUDE PETROLEUM BY FIELDS AND STATES WITH CLASSIFICATION BY GRAVITY (Barrels of 42 U. S. gallons)

	May, 1929 Total	May, 1929 Dy.av.	April, 1929 Total	April, 1929 Dy.av.	Jan.-May., 1929	Jan.-May., 1928
FIELD:						
Appalachian	2,886,000	93,100	2,709,000	90,300	13,163,000	12,721,000
Lima-Indiana	134,000	4,300	125,000	4,200	594,000	702,000
Michigan	231,000	7,500	158,000	5,200	823,000	174,000
Illinois-S. W. Indiana	628,000	20,200	532,000	17,700	2,961,000	3,074,000
Mid-Continent	49,714,000	1,603,700	46,707,000	1,556,900	237,784,000	222,485,000
Gulf Coast	4,612,000	148,800	4,535,000	151,200	21,590,000	18,127,000
Rocky Mountain	2,157,000	69,600	2,049,000	68,300	10,437,000	11,958,000
California	24,053,000	775,900	23,295,000	776,500	117,360,000	93,797,000
United States total	84,415,000	2,723,100	80,110,000	2,670,300	404,712,000	363,038,000
STATE:						
Arkansas	2,230,000	71,900	2,233,000	74,400	11,273,000	13,226,000
California	24,053,000	775,900	23,295,000	776,500	117,360,000	93,797,000
Colorado	221,000	7,100	187,000	6,200	1,012,000	1,149,000
Illinois	550,000	17,700	456,000	15,200	2,567,000	2,703,000
Indiana	84,000	2,700	82,000	2,700	420,000	410,000
Southwestern	78,000	2,500	76,000	2,500	394,000	371,000
Northeastern	6,000	200	6,000	200	26,000	39,000
Kansas	3,793,000	122,400	3,379,000	112,700	16,023,000	16,992,000
Kentucky	635,000	20,500	583,000	19,500	2,874,000	2,993,000
Louisiana	1,632,000	52,700	1,624,000	54,100	8,212,000	8,837,000
Gulf Coast	567,000	18,300	578,000	19,300	2,993,000	2,167,000
Rest of State	1,065,000	34,400	1,046,000	34,800	5,219,000	6,670,000
Michigan	231,000	7,500	158,000	5,200	823,000	174,000
Montana	272,000	8,800	260,000	8,700	1,395,000	1,732,000
New Mexico	96,000	3,100	78,000	2,600	408,000	367,000
New York	289,000	9,300	277,000	9,200	1,328,000	974,000
Ohio	579,000	18,700	560,000	18,700	2,700,000	2,972,000
Central and Eastern	451,000	14,600	441,000	14,700	2,132,000	2,309,000
Northwestern	128,000	4,100	119,000	4,000	568,000	663,000
Oklahoma	21,743,000	701,400	20,586,000	686,200	106,416,000	98,485,000
Osage County	.....	.....	1,277,000	42,600	.....	9,173,000
Rest of State	.....	.....	19,309,000	643,600	.....	89,312,000
Pennsylvania	1,018,000	32,800	939,000	31,300	4,529,000	4,019,000
Tennessee	2,000	100	3,000	100	10,000	20,000
Texas	24,928,000	804,100	23,420,000	780,700	117,450,000	103,072,000
Gulf Coast	4,045,000	130,500	3,957,000	131,900	18,597,000	15,960,000
Rest of State	20,883,000	673,600	19,463,000	648,800	98,853,000	87,112,000
West Virginia	491,000	15,800	466,000	15,500	2,290,000	2,406,000
Wyoming	1,568,000	50,600	1,524,000	50,800	7,622,000	8,710,000
Salt Creek	928,000	29,900	945,000	31,500	4,649,000	6,003,000
Rest of State	640,000	20,700	579,000	19,300	2,973,000	2,707,000
CLASSIFICATION BY GRAVITY (approx.):						
Light crude	76,009,000	2,451,900	71,799,000	2,393,300	364,076,000	323,652,000
Heavy crude	8,406,000	271,200	8,311,000	277,000	40,636,000	39,386,000

(Continued on Next Page)

THE OIL INSURANCE ASSOCIATION

PROVIDES FOR REAL FIRE INSURANCE FOR THE OIL INDUSTRY — THROUGH ITS MEMBER COMPANIES

The Oil Insurance Association is in its eleventh year of successful operation, with 100% performance record testifying to the dependability, thrift and speedy and complete satisfaction of its service.

OIL INSURANCE ASSOCIATION MEMBER COMPANIES

Aetna Insurance Co., Hartford, Conn.
Alliance Insurance Co., Philadelphia, Pa.
Allied Underwriters Agency, Hong Kong
American Insurance Co., Newark, N. J.
American Alliance Ins. Co., New York, N. Y.
American Central Insurance Co., St. Louis, Mo.
American Eagle Fire Ins. Co., New York, N. Y.
Automobile Insurance Co., Hartford, Conn.
Ben Franklin Underwriters, Pittsburgh, Pa.
Boston Insurance Co., Boston, Mass.
Caledonian Insurance Co., Edinburg, Scotland
California Insurance Co., San Francisco, Calif.
Camden Fire Insurance Association, Camden, N. J.
Carolina Insurance Co., Wilmington, N. C.
Central States Fire Ins. Co., Wichita, Kans.
Citizens Insurance Co., St. Louis, Mo.
City of New York Insurance Co., New York, N. Y.
Columbia Insurance Co., Jersey City, N. J.
Commerce Insurance Co., Glens Falls, N. Y.
Commercial Union Assurance Co., London, Eng.
Commercial Union Fire Ins. Co., New York, N. Y.
Commonwealth Insurance Co., New York, N. Y.
Concordia Fire Insurance Co., Milwaukee, Wis.
Connecticut Fire Ins. Co., Hartford, Conn.
Constitution Underwriters, Springfield, Mass.
Continental Insurance Co., New York, N. Y.
County Fire Insurance Co., Manchester, N. H.
Eagle Star & British Dom. Ins. Co., Ltd., London, Eng.
East & West Insurance Co., New Haven, Conn.
Federal Union Insurance Co., Chicago, Ill.
Fidelity-Phenix Fire Ins. Co., New York, N. Y.
Fire & Marine Underwriters, Hartford, Conn.
Fireman's Fund Ins. Co., San Francisco, Calif.
Firemens Insurance Co., Newark, N. J.
Firemens Underwriters, Newark, N. J.
Franklin Fire Insurance Co., Philadelphia, Pa.
Girard Fire & Marine Ins. Co., Philadelphia, Pa.
Girard Underwriters, Philadelphia, Pa.
Glens Falls Insurance Co., Glens Falls, N. Y.
Great American Ins. Co., New York, N. Y.
Hanover Fire Insurance Co., New York, N. Y.
Harmonia Fire Insurance Co., Buffalo, N. Y.
Hartford Fire Insurance Co., Hartford, Conn.
Home Fire & Marine Ins. Co., San Francisco, Cal.
Home Insurance Co., New York, N. Y.
Hudson Insurance Co., New York, N. Y.
Imperial Assurance Co., New York, N. Y.
Insurance Co. of North America, Philadelphia, Pa.
Insurance Co. of State of Pennsylvania, Philadelphia, Pa.
Jersey Fire Underwriters, Newark, N. J.
Liverpool & London & Globe Ins. Co., Liverpool, Eng.
Mechanics Insurance Co., Philadelphia, Pa.
Mechanics Underwriters, Philadelphia, Pa.
Mercantile Insurance Co., New York, N. Y.
National Ben Franklin Fire Ins. Co., Pittsburgh, Pa.
National Fire Insurance Co., Hartford, Conn.
National Liberty Ins. Co. of America, New York, N. Y.
National Security Fire Ins. Co., Omaha, Neb.
Newark Fire Insurance Co., Newark, N. J.
New Hampshire Fire Ins. Co., Manchester, N. H.
New York Underwriters Ins. Co., New York, N. Y.
Niagara Fire Ins. Co., New York, N. Y.
North British & Mercantile Ins. Co., London, Eng.
Norwich Union Fire Ins. Society, Norwich, Eng.
Occidental Underwriters, San Francisco, Calif.
Old Colony Ins. Co., Boston, Mass.
Palatine Insurance Co., London, Eng.
Patriotic Insurance Co. of America, New York, N. Y.
Pennsylvania Fire Ins. Co., Philadelphia, Pa.
Philadelphia Fire & Marine Ins. Co., Philadelphia, Pa.
Phoenix Assurance Co., London, Eng.
Phoenix Insurance Co., Hartford, Conn.
Providence Washington Ins. Co., Providence, R. I.
Queen Insurance Co., New York, N. Y.
Reliance Insurance Co., Philadelphia, Pa.
Rochester Dept. of Great American, New York, N. Y.
Royal Exchange Assurance Co., London, Eng.
Royal Insurance Co., Ltd., Liverpool, Eng.
Scotch Underwriters, Edinburg, Scotland
Scottish Union & National Ins. Co., Edinburg, Scotland
Security Insurance Co., New Haven, Conn.
Sentinel Fire Insurance Co., Springfield, Mass.
Springfield Fire & Marine Ins. Co., Springfield, Mass.
St. Paul Fire & Marine Ins. Co., St. Paul, Minn.
Star Insurance Co. of America, New York, N. Y.
Sun Insurance Office, London, Eng.
Svea Fire & Life Ins. Co., Gothenburg, Sweden.
Superior Fire Ins. Co., Pittsburgh, Pa.
Travelers Fire Insurance Co., Hartford, Conn.
Union Assurance Society, London, Eng.
Union Insurance Society of Canton, Hong Kong
United Firemen's Insurance Co., Philadelphia, Pa.
Urbaine Fire Ins. Co., Paris, France
Westchester Fire Ins. Co., New York, N. Y.
World Fire & Marine Ins. Co., Hartford, Conn.

AMONG THE PURPOSES FOR WHICH THE OIL INSURANCE ASSOCIATON WAS ORGANIZED ARE:

To enable oil operators to secure sufficient dependable insurance to adequately protect their interests.

To furnish property holders and those controlling oil business expert engineering and inspection service, so methods of insuring this class may be standardized, and efficient fire protective devices installed and properly maintained, thereby stabilizing the business to the point which will enable insurance companies generally to accept the class at fair cost and under equitable policy rates.

To make available the most business-like insurance arrangement for all oil companies.

Complete details of the Oil Insurance Association may be obtained from your insurance agent or broker.

OIL INSURANCE ASSOCIATION
H. M. Carmichael, Gen'l Mgr.
175 W. JACKSON BLVD., CHICAGO

The
LORRAINE

Type "M" Automatic GAS AND OIL SEPARATOR

Eliminates Personal Care

The Type "M" Gas Trap automatically controls the constantly varying gas pressure and oil flow, eliminating the personal element in the care of a flowing well.

It differs slightly in design and construction from other types of Lorraine Traps, but retains the same characteristic economy and efficiency in operation.

The Type "M" Separator is designed to handle varying capacities of gas or oil. They are especially adapted for wells that flow by heads, having a tendency to settle the well down somewhat.

The valves are more easily operated and absolutely accurate because the float rises upward in the trap in a vertical motion instead of an angular one when the fluid is turned into the trap.

The Lorraine is the only separator having complete automatic and positive control of the gas and oil outlet valves.

We will be glad to send you specifications and data upon request.

THE LORRAINE CORP.
MANUFACTURERS AND DISTRIBUTORS
OIL WELL SPECIALTIES
115th and Alameda Streets
Los Angeles, Calif.

Oklahoma Branch:
The Lorraine Corporation,
Percy D. Hammer, Agent,
412 West First Street,
Tulsa, Okla.

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES, TO DOMESTIC CONSUMERS (Barrels)

	May, 1929 Total	May, 1929 Dy.av.	April, 1929 Total	April, 1929 Dy.av.	Jan.-May., 1929	Jan.-May., 1928
Domestic petroleum by fields of origin:						
Appalachian	2,928,000	94,400	2,583,000	86,100	13,088,000	12,877,000
Lima-Indiana	259,000	8,300	140,000	4,700	902,000	602,000
Michigan	231,000	7,500	158,000	5,200	823,000	174,000
Illinois and S. W. Indiana	650,000	21,000	725,000	24,200	3,200,000	2,971,000
Mid-Continent	51,760,000	1,669,700	47,609,000	1,587,000	235,292,000	205,288,000
Gulf Coast	4,197,000	135,400	3,660,000	122,000	19,513,000	19,453,000
Rocky Mountains	2,327,000	75,100	2,359,000	78,600	11,476,000	12,066,000
Deliveries and exports	62,352,000	2,011,400	57,234,000	1,907,800	284,294,000	253,431,000
Deliveries	60,909,000	1,964,800	56,280,000	1,876,000	278,584,000	249,176,000
Foreign petroleum	7,554,000	243,700	7,835,000	261,200	37,237,000	31,427,000
Deliveries of domestic and foreign petroleum	68,463,000	2,208,500	64,115,000	2,137,200	315,821,000	280,603,000

NUMBER OF PRODUCING OIL WELLS COMPLETED*

May, 1929	1,191	January-May, 1929	5,761
April, 1929	1,207	January-May, 1928	4,471

*For states east of California, from The Oil and Gas Journal; for California, from the American Petroleum Institute.

STOCKS OF CRUDE PETROLEUM IN THE UNITED STATES (Barrels)

	May 31, 1929	April 30, 1929	May 31, 1928
AT REFINERIES (and in coastwise transit thereto). Reported by location of storage:			
East Coast: Domestic	9,367,000	9,442,000	7,778,000
Foreign	6,484,000	6,313,000	6,140,000
Appalachian	2,645,000	2,493,000	2,266,000
Indiana, Illinois, Kentucky, etc.	2,974,000	2,932,000	3,097,000
Oklahoma, Kansas and Missouri	6,034,000	6,059,000	6,193,000
Texas: Inland	2,464,000	2,150,000	1,790,000
Gulf Coast: Domestic	9,492,000	9,016,000	8,110,000
Foreign	344,000	598,000	111,000
Arkansas and inland Louisiana	1,470,000	1,223,000	797,000
Louisiana Gulf Coast: Domestic	3,391,000	3,311,000	4,722,000
Foreign	1,818,000	2,070,000	979,000
Rocky Mountain	2,075,000	2,123,000	1,430,000
Total east of California	48,538,000	47,730,000	43,413,000
ELSEWHERE THAN AT REFINERIES:			
Domestic—Reported by field of origin:			
Appalachian:			
New York, Pennsylvania, West Virginia, Eastern and Central Ohio—Gross	4,993,000	5,024,000	6,286,000
Net	4,711,000	4,745,000	5,978,000
Kentucky—Gross	1,012,000	1,020,000	1,335,000
Net	866,000	874,000	1,200,000
Lima-Indiana—Gross	1,037,000	1,162,000	1,415,000
Net	854,000	979,000	1,234,000
Illinois-S. W. Indiana—Gross	11,786,000	11,808,000	12,776,000
Net	11,128,000	11,150,000	12,273,000
Mid-Continent:			
Oklahoma; Kansas; Panhandle, Central, North and West Texas—Gross	257,905,000	258,338,000	250,482,000
Net	245,021,000	245,478,000	237,666,000
Northern Louisiana and Arkansas—Gross	27,197,000	28,234,000	28,996,000
Net	23,278,000	24,867,000	26,370,000
Gulf Coast—Gross	20,893,000	20,474,000	17,015,000
Net	20,381,000	19,966,000	16,596,000
Rocky Mountain—Gross	24,501,000	24,667,000	27,174,000
Net	24,462,000	24,632,000	27,130,000
Total pipe line and tank farm stocks east of California—Gross	349,324,000	350,727,000	345,479,000
Net	330,701,000	332,691,000	328,447,000
Foreign crude petroleum on Atlantic Coast	110,000	94,000	58,000
Foreign crude petroleum on Gulf Coast	173,000	191,909	51,000
	283,000	285,000	109,000
Total refinery, pipe line and tank farm stocks of domestic and foreign crude petroleum east of California	379,542,000	380,706,000	371,969,000
CLASSIFICATION BY GRAVITY (approx.):			
East of California:			
Light crude (24 degrees and above)	332,011,000	331,301,000	320,381,000
Heavy crude (below 24 degrees)	47,531,000	49,405,000	51,588,000
California: Light	29,038,000	26,500,000	19,170,000
Heavy (including fuel)	101,681,000	100,332,000	93,941,000
PRODUCERS' STOCKS (not included above, approx.):			
East of California	7,450,000	7,200,000	.....
California	1,950,000	2,070,000	.....

COMPARATIVE ANALYSIS (THOUSANDS OF BARRELS OF 42 U. S. GALLONS)

	Runs to stills Total	Runs to stills Dly. av.	Imports* Total	Imports* Dly. av.	Exports* Total	Exports* Dly. av.	Stks. end period	Dom. demand Total	Dom. demand Dly. av.
Crude petroleum—									
May, 1929	84,420	2,723	7,552	244	1,932	62	†408,580	.....	.....
April, 1929	80,459	2,682	7,828	261	1,726	58	†407,206	.....	.....
Jan.-May, 1929	396,443	2,625	37,261	247	8,880	59	†408,580	.....	.....
May, 1928	77,311	2,494	6,766	218	1,493	48	†391,139	.....	.....
Jan.-May, 1928	358,519	2,359	31,453	207	6,801	45	†391,139	.....	.....
	Production Total	Dly. av.							
Gasoline—									
May, 1929	36,270	1,170	729	24	5,249	169	44,648	34,117	1,101
April, 1929	34,636	1,155	822	27	4,629	154	47,015	32,019	1,067
Jan.-May, 1929	170,972	1,132	2,783	18	23,164	153	44,648	139,009	921
May, 1928	30,825	994	368	12	5,812	187	38,224	28,346	914
Jan.-May, 1928	144,255	949	2,033	13	20,993	138	38,224	120,387	792
Kerosene—									
May, 1929	4,902	158	6	..	1,463	47	7,742	3,200	103
April, 1929	4,434	148	21	1	1,657	55	7,497	3,156	105
Jan.-May, 1929	22,986	152	90	1	8,528	56	7,742	15,807	105
May, 1928	5,243	169	1	..	2,057	66	7,537	3,383	109
Jan.-May, 1928	24,798	163	84	1	9,722	64	7,537	15,338	101
Gas Oil and Fuel Oil—									
May, 1929	38,570	1,244	1,983	64	3,100	100	‡137,317	.....	.....
April, 1929	37,533	1,251	1,778	59	2,892	96	‡133,736	.....	.....
Jan.-May, 1929	184,728	1,223	5,708	38	15,086	100	‡137,317	.....	.....
May, 1928	35,620	1,149	784	25	3,612	117	§126,828	.....	.....
Jan.-May, 1928	168,837	1,111	4,027	26	19,387	128	§126,828	.....	.....
Lubricants—									
May, 1929	3,005	97	4	..	844	27	8,370	2,322	75
April, 1929	2,899	97	3	..	786	26	§8,527	§2,442	§81
Jan.-May, 1929	14,295	96	14	..	4,662	31	8,370	9,617	64
May, 1928	3,091	100	3	..	1,063	34	8,060	1,989	64
Jan.-May, 1928	14,378	95	4	..	4,734	31	8,060	9,448	62
Wax (Thousands of lbs.)—									
May, 1929	53,783	1,735	2,748	89	18,662	602	179,139	29,417	949
April, 1929	57,976	1,933	2,680	89	22,664	755	170,687	25,709	857
Jan.-May, 1929	277,043	1,835	14,105	93	116,877	774	179,139	105,476	699
May, 1928	51,072	1,647	1,855	60	34,826	1,123	103,639	24,171	780
Jan.-May, 1928	263,326	1,732	9,072	60	186,843	1,229	103,639	122,554	872

*From Bureau of Foreign and Domestic Commerce, subject to revision. Exports include shipments to Alaska, Hawaii, and Porto Rico. †Includes California light crude. ‡Includes California heavy crude and fuel oil. §Revised.

(Continued on Next Page)

Announcement!

THE Elliott Core Drilling Company has transferred, effective July 1st, 1929, to the Reed Roller Bit Company of Houston, Texas, all of its stocks of material and machinery and personal properties situated in the territory east of the Rocky Mountains in the United States, together with the manufacturing rights on Elliott Rotary Core Drills.

The Reed Roller Bit Company will retain the experienced men now employed by the Elliott Core Drilling Company, thereby assuring the users of Elliott products the same high type of service and quality of product heretofore given by this company.

We respectfully solicit for the Reed Roller Bit Company the same co-operation that it has been our pleasure to enjoy, and trust that this transfer will meet with your approval.

ELLIOTT CORE DRILLING CO.
850 Subway Terminal Building
LOS ANGELES, CALIFORNIA

Export Office:
150 Broadway, New York

Elliott core drills

Lights when you want them...

THE Pyle-National Type "M-2-S" rig lighting unit delivers steady, reliable lighting on any job, and keeps on running month after month with the least possible attention.

Large capacity and heavy duty construction make this unit ideal for modern requirements of lighting service on the job. Safety switch and fuse box is standard equipment, making Type "M-2-S" a complete unit, easily installed and operated.

Send for Pyle-National bulletins describing Type "M-2-S".

The Pyle-National Company

General Offices and Works:

1334-1358 North Kostner Avenue, Chicago, Ill., U. S. A.

Direct Factory Representative

ALEX JOHNSON, 1000 Marine Bank Building, Houston, Texas

O&GJ 7-18 Gray

RUNS TO STILLS AND OUTPUT OF REFINERIES IN THE UNITED STATES, MAY, 1929

Input—	Crude oil—Domestic	Crude oil—Foreign	Unfinished oils rerun	Natural gasoline	Total input (bbls.)
East Coast	8,769,000	6,039,000	1,078,000	231,000	16,117,000
Appalachian	3,040,000	.....	131,000	31,000	3,202,000
Ind., Ill., Ky., etc.	9,226,000	.....	680,000	176,000	10,082,000
Okla., Kans., Mo.	10,006,000	.....	370,000	314,000	10,690,000
Texas	18,038,000	473,000	862,000	761,000	20,134,000
Louisiana and Arkansas	6,018,000	692,000	295,000	631,000	7,636,000
Rocky Mountain	2,261,000	.....	713,000	135,000	3,109,000
California	19,858,000	.....	*276,000	†1,389,000	21,523,000
Total United States	77,216,000	7,204,000	4,405,000	3,668,000	92,493,000
Daily average, 5/29	2,490,800	232,400	142,100	118,300	2,983,600
Daily average, 4/29	2,460,000	222,000	151,800	120,000	2,953,800
Texas Gulf Coast	12,401,000	473,000	787,000	603,000	14,264,000
Louisiana Gulf Coast	3,818,000	692,000	135,000	505,000	5,150,000

Output—	Gasoline (bbls.)	Kerosene (bbls.)	Gas oil and fuel oil (bbls.)	Lubricants (bbls.)	Wax (lbs.)
East Coast	4,797,000	699,000	8,073,000	861,000	20,672,000
Appalachian	1,418,000	304,000	624,000	504,000	8,187,000
Ind., Ill., Ky., etc.	5,464,000	458,000	2,967,000	336,000	5,632,000
Okla., Kans., Mo.	5,229,000	890,000	3,432,000	231,000	3,645,000
Texas	7,903,000	1,110,000	8,281,000	768,000	6,903,000
Louisiana and Arkansas	2,697,000	399,000	3,056,000	81,000	5,544,000
Rocky Mountain	1,477,000	197,000	704,000	55,000	3,200,000
California	7,285,000	845,000	11,433,000	169,000	.....
Total United States	36,270,000	4,902,000	38,570,000	3,005,000	53,783,000
Daily average, 5/29	1,170,000	158,100	1,244,200	96,900	1,734,900
Daily average, 4/29	1,154,500	147,800	1,251,100	96,600	1,932,500
Texas Gulf Coast	5,888,000	834,000	5,244,000	738,000	6,716,000
Louisiana Gulf Coast	1,950,000	362,000	1,694,000	66,000	5,544,000

Input—	Coke (tons)	Asphalt (tons)	Other finished products (bbls.)	Unfinished products (bbls.)	Shortage (bbls.)
East Coast	13,700	155,900	208,000	78,000	401,000
Appalachian	3,800	1,000	21,000	100,000	177,000
Ind., Ill., Ky., etc.	36,700	34,600	207,000	133,000	123,000
Okla., Kans., Mo.	31,300	1,400	65,000	241,000	409,000
Texas	33,500	21,400	7,000	890,000	873,000
Louisiana and Arkansas	11,400	39,600	235,000	655,000	223,000
Rocky Mountain	11,500	1,800	6,000	545,000	32,000
California	.....	59,600	245,000	*749,000	463,000
Total United States	141,900	315,100	994,000	3,391,000	2,701,000
Daily average, 5/29	4,580	10,160	32,100	109,400	87,100
Daily average, 4/29	4,360	9,420	25,400	99,900	97,000
Texas Gulf Coast	27,300	21,400	2,000	595,000	694,000
Louisiana Gulf Coast	11,300	34,100	230,000	511,000	79,000

Note—Wax, coke and asphalt equivalent to 278.7 pounds per barrel and 5.12 and 5.53 bbls. per ton, respectively.

*Includes 248,000 bbls. net tops produced. †Includes 232,000 bbls. run through pipe lines.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, MAY, 1929 (Barrels)

	Straightrun	%	Cracked	%	Natural gasoline	%	Total
East Coast	2,555,000	53	2,011,000	42	231,000	5	4,797,000
Appalachian	928,000	66	459,000	32	31,000	2	1,418,000
Ind., Ill., Ky., etc.	2,963,000	54	2,325,000	43	176,000	3	5,464,000
Okla., Kans., Mo.	3,154,000	60	1,761,000	34	314,000	6	5,229,000
Texas	4,283,000	54	2,859,000	36	761,000	10	7,903,000
Louisiana and Arkansas	1,293,000	48	773,000	29	631,000	23	2,697,000
Rocky Mountain	701,000	48	641,000	43	135,000	9	1,477,000
California	5,002,000	69	894,000	12	*1,389,000	19	7,285,000
Total	20,879,000	58	11,723,000	32	3,668,000	10	36,270,000
Total April, 1929	20,390,000	59	10,644,000	31	3,602,000	10	34,636,000
Total Jan.-May, 1929	99,902,000	58	53,806,000	32	17,264,000	10	170,972,000
Gulf Coasts	3,675,000	47	3,055,000	39	1,108,000	14	7,838,000

*Includes 232,000 bbls. run through pipe lines.

STOCKS HELD BY THE REFINING COMPANIES IN THE UNITED STATES, MAY 31, 1929

	Gasoline (bbls.)	Kerosene (bbls.)	Gas oil and fuel oil (bbls.)	Lubricants (bbls.)
East Coast	7,218,000	1,196,000	6,057,000	2,719,000
Appalachian	1,698,000	272,000	963,000	1,187,000
Ind., Ill., Ky., etc.	7,118,000	639,000	2,613,000	659,000
Okla., Kans., Mo.	5,382,000	566,000	5,966,000	449,000
Texas	6,565,000	1,467,000	12,271,000	2,160,000
Louisiana and Arkansas	2,368,000	635,000	6,578,000	130,000
Rocky Mountain	2,460,000	203,000	1,191,000	161,000
California	11,839,000	2,764,000	.....	905,000
Total	44,648,000	7,742,000	*35,636,000	8,370,000
Total 4/30/29	47,015,000	7,497,000	*33,404,000	†8,527,000
Texas Gulf Coast	5,576,000	1,328,000	8,849,000	2,113,000
Louisiana Gulf Coast	2,061,000	615,000	5,150,000	125,000

	Wax (lbs.)	Coke (tons)	Asphalt (tons)	Other finished products (bbls.)	Unfinished oils (bbls.)
East Coast	35,736,000	20,400	106,200	123,000	3,300,000
Appalachian	20,273,000	3,500	1,200	63,000	1,447,000
Ind., Ill., Ky., etc.	15,473,000	41,900	30,700	215,000	3,902,000
Okla., Kans., Mo.	9,732,000	39,400	3,800	59,000	2,102,000
Texas	10,606,000	176,100	7,600	15,000	11,224,000
Louisiana and Arkansas	15,090,000	55,800	26,000	76,000	2,397,000
Rocky Mountain	22,229,000	83,800	7,800	33,000	1,608,000
California	.....	300	53,000	239,000	‡9,325,000
Total	179,139,000	471,200	236,300	814,000	40,305,000
Total 4/30/29	170,687,000	444,900	248,800	735,000	39,645,000
Texas Gulf Coast	10,334,000	162,300	7,500	7,000	9,964,000
Louisiana Gulf Coast	15,090,000	55,500	21,200	74,000	1,682,000

*East of California. †Revised (Appalachian district). ‡Includes 1,930,000 bbls. tops in storage.

STATISTICS OF IMPORTANT FIELDS, MAY, 1929

The brisk demand for Seminole crude during May, combined with better prices, was instrumental in once more raising the daily average production of the district to above the 400,000-bbl. mark. The daily average output for the greater Seminole area, including St. Louis, in May amounted to 405,000 bbls., as compared with 396,000 bbls. for April. Stocks at Seminole again increased and amounted to 19,096,000 bbls. on May 31, 1929.

West Texas staged a partial recovery from its slump of the previous month, the daily average production of 376,000 bbls. in May constituting an increase of 11,000 bbls. over the previous month.

Production at Long Beach fell off materially, considering the consistent production record of this field. Santa Fe Springs, however, rallied, its daily average output of May, 182,000 bbls., being 24,000 bbls. higher than in April.

Although the average initial production of the West Texas completions in May

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SPEEDY MELTING Saves You MONEY!

THE STANDARD Model "D" Tar Heater saves you money on every pipe-line job.

Because it melts bitumen at high speed—eliminating waste labor due to costly waits for "hot stuff."

Because it is so designed that the heat is perfectly distributed under the entire circular vat bottom—effecting a material saving in fuel.

Because it is built of heavy boiler plate steel, electric arc welded throughout — reducing repairs and maintenance costs to the minimum.

These and many other features make the STANDARD Model "D" the most efficient, economical and safest Tar Heater for pipe-line insulation jobs. Sizes, 250, 500 and 1000 gallon sizes.

MODEL "C"—When you need "hot stuff" *quick* for emergency insulation repairs—have this kettle on hand. It's a speedy melter like the Model "D". Has same outstanding features of efficiency. 55, 80, 105 and 165 gallon sizes.

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Bulk Storage Tanks Delivery Cans Buckets Couplings
Filling Station Equipment (complete)
Gasoline Pumps (visible) Oil Burners (for Heaters)
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Write, wire or phone collect for specifications and prices!

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reached the unusually high figure of 4,400 bbls., the number of dry holes for the month exceeded the number of completions. This was due, in a large measure, to the comparative lack of success attending wildcatting endeavors.

PRODUCTION AND GRAVITY
(Barrels of 42 U. S. gallons)

	May, 1929 Total	May, 1929 Daily av.	April, 1929 Total	April, 1929 Daily av.	May, 1928 Total	May, 1928 Daily av.	Av. grav.
Seminole	12,568,000	405,009	11,869,000	396,000	8,987,000	290,000	39.0
St. Louis, etc.	.....	.....	.....	.....	496,000	16,000	40.0
West Texas	11,671,000	376,000	10,942,000	365,000	10,893,000	351,000	30.0
Long Beach*	5,431,000	175,000	5,703,000	190,000	5,619,000	181,000	26.0
Santa Fe Springs*	5,630,000	182,000	4,750,000	158,000	1,145,000	37,000	33.0

*From American Petroleum Institute.

STOCKS AT SEMINOLE-ST. LOUIS, ETC.
(Barrels of 42 U. S. gallons)

	May 31, '29	April 30, '29	May 31, '28*
Producers' stocks	568,000	570,000	389,000
Tank farm stocks	18,528,000	18,028,000	18,404,000
Total stocks	19,096,000	18,598,000	18,793,000

*Includes stocks at Seminole only.

RECORD OF WELLS, MAY, 1929*

	Completions Oil	Gas	Dry	Total initial production (bbls.)	Average initial production (bbls.)	Drilling May 31
Seminole City, St. Louis, etc.	86	6	27	54,300	600	283
West Texas	42	2	50	184,000	4,400	247
Long Beach	13	0	2	11,100	900	87
Santa Fe Springs	15	0	0	51,500	3,400	170

*From The Oil and Gas Journal.

MILLIONS SAVED BY ACCIDENT PREVENTION

(Continued from Page 46)

president of the Standard Oil Co. of New Jersey, presented for the National Safety Council a total of seven bronze plaques to the units having the lowest frequency rate in their respective divisions.

Educational Service

A new and rather novel educational service has been introduced in the petroleum section in the form of a projector film strip. The film strip was planned by the petroleum representative of the section in the form of an advance scenario of photographs to represent situations involved in the giving of safe service at service stations. As he visited members, at various petroleum operations throughout the nation, he took pictures as outlined in the scenario. From these pictures 57 were selected, appropriate captions were written and a film strip with the caption, "Safety in Gasoline Service Station Operation" was produced. Many petroleum companies are now using this film strip, for the instruction of their service station supervisors and service station salesmen.

The petroleum representative in his travels obtains many photographs and ideas for safety posters. The council is now preparing two new petroleum section posters each month, and the increasing circulation of these posters proves their fitness and usefulness to the petroleum industry.

Recently the engineering committee and the petroleum representative prepared a six-page, 3 by 6-inch folder entitled, "Help Prevent Fires and Accidents." This folder is for distribution to the patrons of gasoline service stations. It contains 12 suggestions to the patron, on the ways that he may assist in making gasoline deliveries at service stations safer for himself, his car and for the service station salesman.

This folder has been so well received that it is expected that millions of copies will be distributed to service station patrons. This wide distribution proves the interest that petroleum companies have in rendering safe service to their customers, and in the protection of their own employes.

The interest of the American Petroleum Institute, and their provision of the fund that has made it possible for the petroleum section of the National Safety Council to employ a special representative for the petroleum section, is proving of great value to the petroleum industry. The American Petroleum Institute, composed of the leading executives of the petroleum companies throughout the United States interested in promoting the welfare of the petroleum industry, should be proud of this assistance and proud of their accomplishments in accident prevention work.

This accident prevention work has not only saved millions of dollars to the petroleum industry, but it has had other important and lasting results.

The reductions for certain companies in their industrial accident claims costs, as mentioned above, is not being effected through the curtailment of medical care and hospital facilities. In fact, these expenses have been increased. The total costs have been reduced through the reduction of the frequency of accidents and through better attention for the injured, thereby lessening the time of disability and shortening the time period for the claims costs.

It is interesting to pause and consider the enormous savings represented when the claims costs of a company can be reduced to $7.84 per pay roll employe, as contrasted with a payment of more than $40 by some other companies. But it is still more interesting to consider the hours of pain and suffering that such a company has been able to save for its workers, in addition to the benefits that the families of these workers and their communities have received through such uninterrupted earnings.

SAFETY IN FIELD IS MATTER OF TRAINING

(Continued from Page 46)

are not bargains and their inevitable costs, accidents, cannot be afforded.

There is one by-product of our industry which no chemist has ever yet found a way to use, and that is an accident.

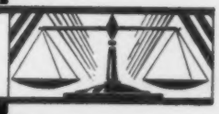
With the incessant milling of labor turnover and the shifting of men from one type of work to another there is much need for safety education. It is imperative, if accident prevention work is to become fully efficient, that employes be taught the value of working with a proper regard for order. Men must come to learn that chaos of thought or action is an outstanding enemy of safety.

I believe that all safety men will agree that safeguards and safety appliances are best used and most effective only after the men who use and operate them have been taught the fundamentals of safety. It is recognized that no place of work can be made fool proof, and that no machine nor appliance is ever more safe than the mind of the man who operates it. Without doubt, the effectiveness of safeguarding of equipment will depend largely upon the success of educating employes. Granting then, that education of employes is of prime importance, we arrive at the problem of how we can best educate them.

It is next to impossible to individually reach each employe on the job, hence the necessity of grouping them together is apparent. Chaotic grouping of men may be somewhat effective, at least they can be lectured to, but seldom if ever can such unorganized meetings reach the ac-

FAMILIAR FACES

are the measure of good will



. . . SEE MORE OF THEM

You can't measure good will in terms of dollars and cents. It's too intangible. But you *can* measure it in terms of these loyal, steady customers who regularly pay dollars and cents for satisfaction. Stations selling Phillips Motor Fuels get a lion's share of such customers—because these superior motor fuels meet the customers' demand for products of unvarying excellence. Back of them is a vast, independent organization that never does, and never will, compromise on quality.

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Phillips 66

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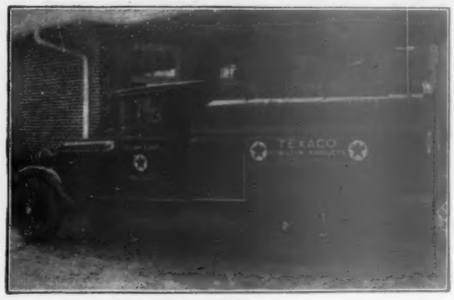

This is a standard Steel-Mounted, Separable-Compartment Leader Tank mounted on a new Ford.

The owner says:—"We are well pleased with this tank. Mounted on our truck and painted in the well known Texaco colors, it looks like a $2,000.00 job. It is well balanced and the whole job looks like it was assembled by the same factory."

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One hour later this truck looked new!

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Sullivan Structure Diamond Drills define trends, and determine sub-surface "highs" without guess work. They will show you the favorable well locations of one or two whole townships, for the cost of a single wildcat.

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tive interest of men sufficient to arouse definite, purposeful action.

An old maxim, "What is everybody's business is usually nobody's business," lucidly explains why it is necessary to organize and delegate duties. Safety is everybody's business, but without proper organization, the responsibility of furthering its cause cannot be placed on each employe's shoulders. Education is indispensable to desired results in safety, likewise proper organization is indispensable to education.

None Unteachable

I have had the argument presented to me that there are some men who cannot be taught. If such men do exist who cannot be taught, it should be plain that these men have no business in the world's greatest industry. To the argument that some men are not teachable, there is but one reply: The art of education depends more upon the teacher than upon the pupil. All normal men, and certainly none of us hire other than normal men, can be taught and are receptive to learning if they are rightly approached. The teacher holds in the hollow of his hand whatever method of approach he chooses to employ.

It appears clear and reasonable to me that a man can be taught more readily than he can be forced. The day of handling men like they were handled by the old school is past. We are living in 1928 and we are working men in 1928, most of whom are twentieth century products. They will not respond to 1890 tactics. Men can no longer be driven and that is right. A little of the milk of human kindness dispensed with the forethought of a modern leader will do much to soften the hardest of hearts and bend the most stubborn of wills. Canning and hell-raising and firing won't do it.

Any boss can fire a man. Firing is no particular indication of ability. It is the duty of the leaders of men to lead in the true sense of the word and not depend so much upon their obscene vocabularies to accomplish their tasks. Leading the strayed from the thorn-strewn byways on to the rosy highways of life is eminently more worth while than kicking them into the ditch.

After all, what do we live for if not to make life less difficult for one another? Whether you think so or not, that is what the efforts and labors of each of us really amount to. This is truly the unseen and the unintentional objective of life. A thorough analysis of any man's work will bring you to this conclusion.

I have tried to put this one thought over to our field superintendents and foremen: Make a man afraid of you and you will never know the secrets of his heart. An employe must be on sympathetic and friendly terms to produce his utmost and to co-operate fully on all mutual undertakings. Safety is, of course, a mutual undertaking. Furthermore, efficiency is purely and simply an offshoot of fraternal relations. Safety thrives best where efficiency dwells supreme.

Here we have another reason for the existence of a safety organization. First, for the purpose of education, and then for the purpose of building and cementing mutual understandings and friendships which are so essential to efficiency and safety. The safety engineer who thinks that a meeting of employes is a place to impose his own ideas makes a great mistake. His ideas may be excellent, but field men do not like things crammed down their necks. They resent, as you would if you were in one of their places, being told the particulars of their jobs by men who are presumed to have little or no practical experience. A field organization should be mostly a medium through which the ideas of experienced workmen can be gleaned in order that these ideas may be put into effect and passed on to others who do not know.

Safety Council Standard

If I am expected to outline to you something new in the way of safety organizations, then I am expected to do more than will be possible for me to do. Most safety organizations, in essentials, are alike. Almost every conceivable plan has been tried and practically all engineers are agreed upon a standard. The National Safety Council recommends that standard. I have no thought of recommending anything other, but merely to briefly tell you how Sinclair Oil & Gas Co. makes this standard workable in producing fields.

Sinclair Oil & Gas Co. establishes and maintains safety organizations known as safety chapters in each and every producing field where 20 or more men may be congregated. All departments are represented. Our first safety chapter was organized June 9, 1925. That chapter, as well as all others that have been subsequently organized, are still in existence and have regularly an average attendance of over 80 per cent of all employes not on duty at each monthly meeting. It is not now, nor has it ever been our policy, to make it mandatory that any employe attend these meetings. There is no penalty imposed upon an absentee whether he misses one or twelve meetings. All safety chapter meetings are held at night on employe's time.

Several of these chapters represent a large territory, and in some cases employes drive 25 to 30 miles on their own time in their own conveyances at their own expense. This arrangement does not seem to dampen their ardor; quite contrarily does it seem to stimulate interest in accidental prevention work.

Interest is aroused by reason of allowing employes to run their safety organizations without interference from the management. The management's part in these organizations is merely to keep sufficient information and data before them so that no meeting can be dry and uninteresting. It is our belief that the key to a successful safety organization lies in giving employes an active part in the running of that organization. Their subsequent interest and participation is a natural sequence.

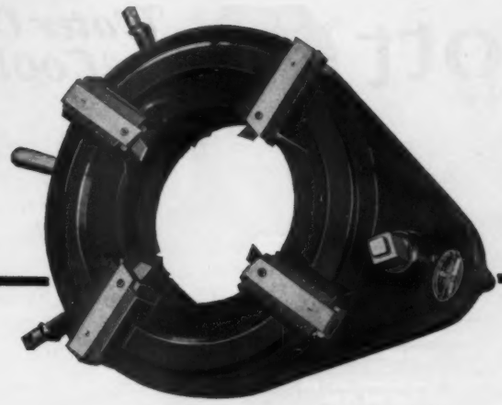
Sinclair Safety Plan

Each Sinclair Oil & Gas Co. safety chapter operates under a constitution chartered by the safety department. This constitution sets out the ideals and purposes of the organization; allows for a rotating safety committee of three members, each one of which serves a term of three months, and no one of which can serve more than three consecutive terms. A secretary-treasurer is also provided. In no case can the superintendent in charge of the operation be chairman of the safety committee. Under the constitution, the superintendent in charge can only be an honorary member of the committee.

The constitution also provides for a regular order of business to be followed at each meeting. This order of business does not permit the discussion of labor questions. Copies of this constitution embodying this order of business will be readily forwarded anyone desiring same.

In conclusion, I want to add that Sinclair Oil & Gas Co. believes in the effectiveness of its safety organizations. After three years continuous existence, all of our safety chapters are still functioning, not with a lesser degree of earnestness and zeal, but with increased faith in their propriety founded upon the knowledge that since the institution of these chapters, accidents have steadily and consistently declined in number. There has been no great momentary decline in our frequency curve, for which we are thankful, but, rather, our decline curve has been gradual. That decline curve has never yet shown an upward average trend, but has consistently pointed downward. This, we think, indicates that our safety policies are built on firm foundations.

When our chapters were first organized, in 1925, our frequency rate stood at 81.3 per million hours. During 1926 that frequency rate was brought down to 70.9 per million hours, and during the year 1927 it was brought down to 51.2 per millions hours. For the first six months of this year, 1928, our frequency rate is 33.8. From present indications, the close of the year 1928 should find us with an average frequency of not more than 30.0. To those of you whose work is confined to refineries where hazards are mostly specific and where labor turnover can be more or less controlled, this frequency



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may seem high, but for a producing company working more than 6,000,000 hours per year and engaging in large development projects under very trying conditions, we feel that a frequency rate of not more than 33.8 is fairly good.

Finally, may I offer you one more thought. We believe that our safety chapters dispense with the necessity of safety inspectors. From a monetary viewpoint in a large organization, the items of salary and expenses constitute no small amount. Through the medium of our chapters, we have tried to get our employes to appreciate that inspectors are mostly nonessential and duplications and that the job of inspecting and reporting is specifically the job of each and every employe. We have tried to place the responsibility of safety on the shoulders of each individual on the pay roll, where, if you will admit as we believe, that safety is primarily an educational endeavor, it most assuredly belongs.

EVOLUTION OF PREMIUM GASOLINES IN MARKETING

(Continued from Page 156)

after 1903. The demand already experienced for more power and greater flexibility of operation had been met by increasing the size of the motors and adding to the number of cylinders.

See how another industrial change worked to the advantage of the automobile maker. Along about 1888 Edison made his invention of the carbon filament electric light. This sounded the knell of the kerosene lamp. The rapid spread in the adoption of electric energy for illumination, together with the increasing use of artificial gas for the same purpose, began to make inroads on the consumption of kerosene by 1900, and by 1903 the rising curve of "coal oil" consumption was flattening out. This was a welcome change, because by 1902 the reserve stocks of gasoline were pretty well exhausted and a shortage of motor fuel appeared to be imminent. The by-product was becoming an end in itself in the scheme of the petroleum refiner. The declining demand for kerosene made it possible to borrow from this product some of the more volatile fractions which were added to gasoline. In this way the quantity was increased at the expense of quality. Whereas the early motor fuel of 76 to 78 degrees Baume gravity had an endpoint as low as 250 degrees Fahrenheit to 300 degrees Fahrenheit, by 1905 it had gradually worked down to 63 to 66 degrees gravity, with an endpoint running up to 350 degrees Fahrenheit. The change had not been effected by the refiner without great wailing and gnashing of teeth on the part of the automobile builder and his customer. The change in quality was not made arbitrarily, but was forced on the refiner in order that he might produce the increased quantity of gasoline required. The industry was on the horns of a dilemma, facing the necessity of further depreciating quality, or of being short in deliveries, which would have had the effect of stifling expansion in the use of the gasoline engine.

Necessity, the alma mater of invention, brought about changes in automotive design to match the decline in Baume readings. First came the jet type carburetor, which produced an air-mist fuel mixture while stopping the drip and waste of heavy ends from the carburetor bowl. Then along came the self-starter, originally actuated (sometimes) by a spring, then by compressed air, and ultimately in its present form, by electricity generated and stored while the car is in use. Then followed the exhaust manifold stove, for preheating the air before it became mixed with the gasoline, and the "hot spot," designed to deliver a dry gas-air mixture to the cylinders. This evolution of the machinery under the car's hood sufficed to keep the interest of prospective automobile purchasers alive. So much so, that the manufacture of cars thereafter grew apace.

Federal Specifications

At length the Federal Government adopted specifications covering the requirements for gasoline that would be acceptable for army and navy use. This grade of gasoline has since been known in the trade as Navy Specification. The requirements were not less than 21 per cent must distill off at 221 degrees Fahrenheit, 50 per cent at 284 degrees Fahrenheit, 90 per cent at 392 degrees Fahrenheit, with the last off at 437 degrees Fahrenheit, which constitute the final boiling or endpoint. Thus the Government officially recognized a depreciated gasoline that was a far cry from the quality on which the infant automobile industry had been nurtured.

The automobile engineer was forced to cut his pattern to fit the cloth. The gradual degradation of gasoline had been accomplished at the expense of power and flexibility in the automotive engine. The 85-pound cylinder compression pressure had dropped of necessity to approximately 65 pounds. The motorist was not pleased with a car of such enfeebled power. Hence the builder endeavored to meet his complaint by increasing the number of cylinders, as well as their diameter and length of piston stroke. The coming of the World War, with its attendant demand for motor fuel and the newly created airplane demand, made it impossible for refiners to produce a quality of gasoline for domestic consumption much above the United States Navy standard.

If the war took its toll from the motorist by depriving him of a higher grade of fuel, it partly compensated him in another direction. The great waste of explosives had brought about the construction of by-product coking plants for coal, far in excess of what had been peace time needs. The return of peace left a large surplus of a coal by-product, benzol, for which there appeared to be no real demand. It soon found a market for purposes of mixing with gasoline, in proportions of about two-fifths benzol and three-fifths gasoline. The resulting fuel withstood higher compression and thereby quickly discovered a ready market, since it operated a badly carbonized engine without knocking. It soon became established as a premium fuel, selling in some localities at 5 cents per gallon more than the straight gasoline.

Much more important in its effect on motor trends was proving the invention of the cracking still in 1914. The widespread adoption and subsequent improvement in the process allowed the petroleum industry to increase the volatility of its chief product, whereupon the automotive engineers promptly began to restore the old compression pressures. They found, however, that there were very definite limits beyond which they could not go in this direction.

One result was that the largest producer of automobiles, the General Motors Corp., set up a special agency to study automotive fuels with a view to making it possible to turn out higher compression engines. It was recognized that gasoline must continue to be depended upon for motor fuel, and that therefore further improvement in the design of motors depended upon changing the characteristics of the fuel. The customer who had been interested first in a single cylinder automobile operating badly enough under the most favorable conditions, and starting with a hand crank, subsequently demanded two, four, six, eight and even twelve cylinders and a selfstarter. The result was that the automobile engine of 1920 started, warmed up, ran more efficiently and quietly on 58 degrees gasoline than its predecessor in 1900 had operated on a 76 degree gravity fuel. Nevertheless, the better type of the early models delivered more horsepower hours per pound of fuel than the sophisticated models in use after the war. The answer—the loss in efficiency—was to be found in the dropping of compression ratio to accommodate the engine to the lower gravity fuel.

On this grade of gasoline, engines with high compression ratios are very apt, on full loads, to give audible knocks with each explosion and to run jerkily under even less severe conditions. Both of these troubles could be cured by reducing the compression ratio, but with the compensating loss in fuel economy which was expressed as loss in power and acceleration

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It therefore became necessary to replace the power lost in the low compression engines with larger cylinders which, of course, consumed more gasoline per mile.

Engine Design

The problem was forcibly brought to the attention of the first general meeting of the American Petroleum Industry held in Washington, D. C., in 1920, by C. F. Kettering, then research head of the General Motors Research Laboratories. "We cannot raise the compression of our engines," he said, "because of the fact that if we do, when the driver opens his throttle, or when the motor gets a little bit dirty, it pounds so hard that it fractures the porcelains in the spark plugs, breaks down the bearings and does all sorts of things. It wrecks the engine. It would be possible, by co-operation between the petroleum and automotive industries, to increase the effeciency of our machines by from one-third to one-half. If you can raise the compression of your motors you can do a lot of things. You can increase the economy, and you can keep out crank case dilution."

These statements were a challenge to the refiner. During the years that immediately followed a large amount of reseach and experimental work was initiated and carried through. The outstanding result was the discovery, after an exhaustive investigation in the General Motors Research Laboratories, of the practicability of reducing the knocking tendency of gasoline by adding small quantities of other substances. A number of these substances were found, but only one which could be obtained in commercial quantities and at a cost which gasoline would stand. This was an obscure chemical compound known as tetra-ethyl lead. A quantity of this tetra-ethyl, sufficient to half fill a teaspoon, added to a gallon of gasoline, instantly eliminated the knock from a high compression or badly carbonized motor. This discovery, which was made by Midgley, resulted in the manufacture of Ethyl gasoline, which now is the most widely distributed and best known of all antiknock fuels.

The petroleum industry co-operated by selecting special crudes for refining, which permitted the production of gasoline of greater antiknock propensities than the average run from a refinery. It also began to study the possibility of reducing the knock tendency of gasoline by changing methods of processing for it.

High Compression Engine

In a very short space of time, considering the problems of obtaining antiknock gasoline and getting widespread distribution for it, automotve manufacturers were enabled to indulge their long cherished dream of increasing compression ratios. One after another, the manufacturers began to increase cylinder pressure, at first selling the high pressure type as an optional motor for the customer willing to employ premium fuel. During the past thee years there has been a great increase in the number of high compression cars. In 1927 there were but five manufacturers in this country producing standard cars with a compression ratio as high as five. Roughly, this figure means cylinders with cubical contents at the top of the piston stroke one-fifth that of the space at the bottom of the stroke when the gas is taken into the cylinder. In 1928 there were 18 motor car manufacturers building standard models with a compression ratio between five and five and one-half, while there was one builder making a model with a ratio of six. Four other manufacturers offered optional types with a compression ratio of five or higher, while two offered optional models with a ratio of six.

In 1929, so far as shown by statistics obtainable from motor car manufacturers) 30 companies are building standard engines with a compression ratio of five or higher. Among them are two models with a ratio of six. Besides these 30, eight manufacturers offer optional models with pressures ratios running from 5 to 6.56. Only 17 out of 44 manufacturers produce either standard or optional models with a compression ratio under five. Of 81 models on the market this year, 57 have a compression ratio of five or

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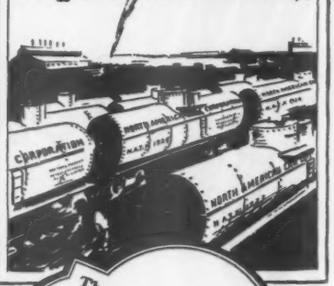

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above, and 24 of less than five. The average standard compression ratio of all models produced this year is 5.07. These statistics show how rapidly the industry has advanced its program of building the more efficient high compression engines and how eagerly the new models have been accepted by the public. As a matter of fact, many of these new cars will not operate at all satisfactorily on regular gasoline, but for their best performance require fuel with marked antiknock properties, high volatility, and with proper balance for power and acceleration. As it costs more to produce, any true antiknock gasoline commands a premium.

The addition of some coloring matter to a gasoline and then advertising it as antiknock fuel does not necessarily make it so. The average driver of a motor car today has been so educated in its operation as to be able to distinguish between fuel values by the way they cause his car to perform. A premium fuel must be uniform in quality from day to day and in every place where sold. This uniformity of quality must be as to the minimum value, and manufacturers of a true premium fuel will always be striving to improve its quality.

Premium Fuels

Conversely, the mere fact that a special motor fuel sells at a premium is not a guarantee that it is a premium article. Nor does it mean anything to the engine that the special fuel may be colored red, blue, pink or yellow. The color is harmless dye. It was added, in the first instance, not to fool anybody but to keep him from being fooled. Tetra-ethyl lead mixed with gasoline does not show. It is not safe to use gasoline so treated for washing, either as a dry cleaning agent or to remove grease from the hands. So a trace of analin dye was put in with the ethyl to keep mother from employing Ethyl gasoline to clean Willie's flannel trousers—as a sort of red lantern. Whereupon some envious fellow who neither made antiknock gasoline nor was willing to pay to get it, bought a nickel's worth of dye and started another brand of "premium" fuel on its way. A lot of buyers have since been disillusioned. They have learned that their automobiles do not read the advertising, but go on performing according to the nature of the fuel supplied them. The real, honest-to-goodness antiknock fuel does its own selling once it has been tried. The undeserving imitations fail to make a showing, so that by a process of elimination the motorist must arrive sooner or later at the true value of "high test," "antiknock" or "premium" fuels.

To some it seems surprising that so many motorists will pay a premium ranging from 3 to 6 cents per gallon for a nondetonating gasoline for use in a car of the older type—low compression. The answer to that is found in the fact that when an engine becomes lined with carbon the volume of its combustion spaces is decreased and this increases the compression. Furthermore, the coating of carbon interferes with cooling and higher temperatures favor the tendency to detonate. When an engine knocks it is because the gasoline and air mixture is burned in an abnormal manner; instead of consuming evenly, there is a sharp detonation or explosion, with a consequent sharp rise in temperature and pressure. This knocking is accompanied by a measureable loss of power, so that even in the older cars which are not built for antiknock fuel there is oftentimes economy in the use of premium gasoline, aside from the added comfort of driving.

The production of the new high compression cars necessitated widespread distribution of suitable fuel. That has now been provided so that today there is no part of the United states, nor in fact, on this continent, where the driver of a car with a compression of 100 pounds per square inch cannot obtain suitable fuel by the payment of a moderate premium. Moreover, even at the higher cost per gallon for his fuel, it is quite likely that he will spend less per mile than the man driving the car of an earlier vintage and using regular gasoline.

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SUMMARY OF ALL FIELDS
WELLS COMPLETED

Field—	Comp.	Prod.	Dry	Gas
Eastern	553	2,677	42	59
Central Ohio	139	1,769	42	47
Lima	21	536	5	2
Indiana	15	195	8	1
Michigan	52	17,878	10	3
Illinois	17	3,094	2	0
Kentucky	100	3,666	24	8
Mississippi	2	....	2	0
Oklahoma	241	61,422	80	16
Kansas	75	19,256	31	5
Texas Panhandle	44	40,849	2	12
North Central Texas	338	13,711	167	14
East Central Texas.	16	463	14	0
West Texas	64	92,449	25	0
Southwest Texas	74	14,576	27	8
East Texas	8	....	6	2
Gulf Coast	147	46,867	58	2
North Louisiana	53	3,991	10	28
Arkansas	21	1,631	12	2
Wyoming	16	1,106	3	0
Montana	53	2,353	9	11
Colorado	9	1,089	4	1
New Mexico	4	....	4	0
Total June	2,062	327,578	587	221
Total May	2,008	389,622	651	233
Difference	54	62,044	64	12

Rigs and Wells Drilling

Field—	Rigs	Drlg.	Ttl.
Eastern	127	411	538
Central Ohio	95	190	285
Lima	3	22	25
Indiana	6	42	48
Michigan	74	113	187
Illinois	2	34	36
Kentucky	15	216	231
Tennessee	4	12	16
Mississippi	7	18	25
Alabama	1	8	9
Oklahoma	147	711	858
Kansas	59	286	345
Texas Panhandle	75	169	244
North Central Texas	116	428	544
East Central Texas	2	20	22
West Texas	67	229	296
Southwest Texas	34	197	231
East Texas	2	20	22
Gulf Coast	42	195	237
North Louisiana	52	119	171
Arkansas	9	40	49
Wyoming	27	153	180
Montana	33	100	133
Colorado	10	88	98
New Mexico	44	81	125
Utah	4	32	36
Total June	1,057	3,944	5,001
Total May	944	3,866	4,810
Difference	113	78	191

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	5	58	2	0
Creek	32	871	16	3
Muskogee	7	32	5	0
Okfuskee	13	2,129	4	0
Okmulgee	8	35	2	2
Osage	24	428	10	1
Payne and Lincoln	5	125	3	0
Pontotoc	4	200	1	1
Pottawatomie	29	17,254	3	0
Seminole	65	35,286	10	4
Stephens	16	718	5	0
Wagoner	5	95	1	2
Miscellaneous	28	4,191	18	3
Total June	241	61,422	80	16
Total May	287	65,509	97	33
Difference	46	4,087	17	17

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Beckham	0	10	10
Carter	2	12	14
Cotton	0	9	9
Creek	14	62	76
Grady	0	3	3
Grant	0	12	12
Hughes	5	18	23
Kay	2	9	11
Kiowa	2	8	10
Logan	3	20	23
Muskogee	5	26	31
Oklahoma	4	27	31
Okfuskee	4	29	33
Okmulgee	6	24	30
Osage	11	31	42
Pawnee	1	16	17
Payne and Lincoln	6	14	20
Pontotoc	4	14	18
Pottawatomie	33	91	124
Seminole	30	170	200
Stephens	6	28	34
Tulsa	0	4	4
Wagoner	2	6	8
Miscellaneous	7	68	75
Total June	147	711	858
Total May	146	724	870
Difference	1	13	12

WELLS COMPLETED
CARTER COUNTY

18-4s-1w Johnson, Shell Pet. Corp. 1 .. dry
26-1s-3w Hernstadt, Gilmer Oil Co. 1.. 5
30-1s-3w Hightower, Magnolia Pet. Co. 1 39
23-1s-3w Gill, Magnolia Pet. Co. 3 14
28-2s-3w Morris, Gypsy Oil Co. 2 ..... dry

Wells completed 5
Production 58
Dry 2

CREEK COUNTY

18-19- 9 Bartlett, H. U. Bartlett et al 3-B ..... gas
31-19- 9 Evans, Evans Bros. 1-A ..... gas
31-19- 9 Cares, Gled Oil Co. 1-A 50
20-17- 7 Beesley, Markham Oil Co. 7 .. dry
3-17- 8 Tiger, Curtis Oil Co. 1 ..... dry
11-17-10 Koch, Whitten & Wilcox 5 5
1-17-11 Frank, Jackson & Wise 2 .... dry
35-16- 8 Harjo, Wilcox O. & G. Co. 8 .... dry
1-16-11 Sinclair, Wm. Sherry 1 ..... dry
30-15- 9 Connessenny, C. G. Tibbens 41. 2
17-14-10 Johnson, Edgewood Oil Co. 5 .. dry
28-14-10 Harjo, Billingslee & Riverland Oil Co. 1 ..... dry
17-19- 9 Grayson, E. H. Short 1 40
8-18- 7 Starr, Silurian Oil Co. 26 190
28-18-11 Fife, Apex O. & G. Co. 2 30
7-17- 7 Deere, Magnolia Pet. Co. 11 .. dry
16-16-10 Garrett, Franchot and Mid-Continent Pet. Corp. 3 20
9-15-10 Snelling, Kawfield O. & G. Co. 7 dry
32-15-12 Buffalo, E. W. Dodge 1-A .... dry
21-17- 7 Litchfield, The Prairie O. & G. Co. 6 475
2-19- 7 Prentice-Johnson, Markham & Tidal Oil 7 ..... dry
18-19- 9 Bartlett, H. U. Bartlett 4-B... gas
36-19- 9 Mesquite, Wm. Sherry and Carter Oil 2 ..... dry
4-18-12 Jackson, C. G. Tibbens 5 8
Grayson, Lynch et al 3 4
27-17- 7 Lewis "B," Magnolia Pet. Co. 10 7
4-17-11 Irelan, Miller et al 1 ..... dry
33-16-11 Sheridan, Chief Drlg. Co. 1 .. dry
16-14-10 Bear, Atlantic O. P. Co. 1 .... dry
16-14- 8 Yahola, The Prairie O. & G. Co. 2 ..... dry
8-18- 7 Musselman, Magnolia Pet. Co. 21 20
12-17-11 Halsell, G. F. Collins et al 2 .. 20

Wells completed 32
Production 871
Dry 16
Gas 3
Gas production 7,250,000

MUSKOGEE COUNTY

3-15-15 Simmons, Bryan Pet. Co. 2 12
8-15-15 Barnett, Bryan Pet. Co. 2 20
23-15-17 Myers, W. C. Cushing 1 ..... dry
9-15-18 Fields, Cook & Day 1 ..... dry
11-14-16 Lee, DeWitt & Baldridge 1 .... dry
5-13-16 Brown, G. H. Lowerre 3 ..... dry
36-15-16 Manuel, C. C. Wachob 1 ..... dry

Wells completed 7
Production 32
Dry 5

OKFUSKEE COUNTY

15-11-11 Lewis, Champlin O. & R. Co. 12 125
23-11-11 Jefferson, Champlin O. & R. Co. 4 5
11-10-11 Simmer, W. L. Umburn 8 510
33-12-11 Stubblefield, Josey Oil Co. 1 .. 200
29-12- 9 Johnson, Tidal Oil Co. 1 ..... dry
29-12-10 Sproleder, McMahon & Carey 1 800
24-11-10 Holmes, Fern O. & G. Co. 1 .. 200
31-11-11 Dindy "B," Mid-Continent Pet. Corp. et al 1 60
12-10-11 Autry, F. Moore et al 1 9
16-10-11 Lowe, Kingwood Oil Co. and Misener 1 ..... dry
2-11- 9 Palmer, The Prairie O. & G. Co. 1 ..... dry
29-12-10 Monarye, Producers & Refiners Corp. 3 220
22-12-11 Jacobs, Independent O. & G. Co. 2 ..... dry

Wells completed 13
Production 2129
Dry 4

OKMULGEE COUNTY

18-15-13 Barnett, Kirkland & Son 1 ... dry
21-12-14 Butler, Prince & Anderson 1 .. 5
7-11-12 Holmes, Moffett et al 3 3
19-15-14 Harrison, A. W. Cline 1-A .... gas
22-15-14 Tiger, Taylor & Geiger 9 2
9-14-14 Love, Riney & Williams 4 .... dry
31-16-12 Finerty, L. C. Wheeler et al 1 gas
30-12-12 Tunley, Rounsaville Oil Co. 3.. 25

Wells completed 8
Production 35
Dry 2
Gas 2
Gas production 19,500,000

OSAGE COUNTY

16-28- 8 J. J. Fitzstephens 1 8
22-27-11 Peters Pet. and P. & R. Corp. 4 125
9-24- 9 W. D. Gray et al 1 ..... dry
17-22-10 Mid-Co Oil Corp. 1 ..... dry
15-21-10 Oklahoma Nat. Gas Corp. 788. dry
11-20-10 Red Bank Oil Co. 1 ..... dry
31-27- 9 A. G. Oliphant et al 1 ..... dry
17-27-10 J. W. Kelso 1 ..... dry
21-24- 7 Marland Oil and Gypsy Oil 1.. 112
5-24- 8 Amerada Pet. Corp. 2 ..... dry
18-24- 8 C. B. Peters 2 ..... dry
14-21- 8 Pueblo Pet. Co. 2 10
30-21-10 Devonian Oil Co. 3 40
20-26- 9 Wrightsman Pet. Corp. 1 .... dry
32-24- 9 Peters Pet. Corp. 3 27
27-24-10 Winona Oil Co. 2 8
28-24-10 Peters Pet. Corp. 2 6
35-23-10 I. T. I. Oil Co. 405 ..... gas
12-22-11 Ray Branstetter et al 1-A .... dry
16-21- 9 Clint Moore estate et al 2 20
21-25-11 Harland Oil Co. 83 35
28-25-12 Phillips Pet. Co. 2 12
6-23- 9 F. R. Billingslee 2 10
12-21- 8 Braden & Moore 15 15

Wells completed 24
Production 428
Dry 10
Gas 1
Gas production 500,000

PAYNE AND LINCOLN COUNTIES

2-16-5 Wolf, Wheeler & Mote et al 1 .. dry
5-16-5 Long, T. P. C. & O. Co. 2 .... dry
31-15-5 Crane, I. T. I. Oil Co. 1 ..... dry
5-17-5 Nims, Mulberry Oil Co. 1 75
Cullison, The Texas Company 1 50

Wells completed 5
Production 125
Dry 2

PONTOTOC COUNTY

19-5-5 Robertson, American O. & R. Co. 1 165
36-5-7 Bates, Loual Drlg. Co. 1 35
23-4-7 Sarkey, Buocher O. & G. Co. 1 .. dry
32-5-7 Crabtree, Belchie & Laskey 1 .. gas

Wells completed 4
Production 200
Dry 1
Gas 1
Gas production 10,000,000

POTTAWATOMIE COUNTY

7-8-5 Calvin, Sinclair O. & G. Co. 3 .. 225
17-8-5 Wallace, Phillips Pet. Co. 2 25
Wallace, Skelly Oil Co. 1 ..... dry
20-8-5 Green, Amerada Pet. Corp. 3 .. 175
23-7-4 Le Clair, Gypsy Oil Co. 1 930
24-7-4 M. Wilbarn, Magnolia Pet. Co. 2 400
20-7-5 C. Youts, Magnolia Pet. Co. 5 .. 300
7-8-5 Calvin, Sinclair O. & G. Co. 2 .. 10
8-8-5 Smith, Empire O. & R. Co. 1 ..1190
20-8-5 Green, Skelly-Lenox 1 335
18-7-5 Nesbit, Sinclair O. & G. Co. 7 .. 35
Nesbit, Sinclair O. & G. Co. 8 .. 260
18-7-5 I. Rowe, Magnolia Pet. Co. 2 10
16-7-4 Burke, Atlantic O. P. Co. and Independent O. & G. Co. 1 890
24-7-4 Lydick, Phillips Pet. Co. 1 35
26-7-4 Cherry, Magnolia Pet. Co. 5 10
19-6-4 Laster, Simms Oil Co. 1 3785
Laster, The Prairie O. & G. Co. and T. B. Slick 1 2105
Laster, The Prairie Oil & Gas Co. and T. B. Slick 2 3595
30-9-5 M. Germany, Magnolia Pet. Co. 1 dry
7-8-5 Calvin, The Texas Company 9 .. 305
14-7-4 Banta, Magnolia Pet. Co. 2 224
Banta, Magnolia Pet. Co. 3 35
15-7-4 Robbins, Magnolia Pet. Co. 4 .. 170
23-7-4 Le Clair, Gypsy Oil Co. 2 250
26-7-4 McGee, I. T. I. Oil Co. 1 250
8-9-5 Reade, Phillips Pet. Co. 1 765
8-9-5 Bullock, Empire O. & R. and Amerada Pet. Corp. 2 890
18-7-5 Rowe, The Prairie O. & G. Co. and T. B. Slick 1 ..... dry

Wells completed 29
Production 17,254
Dry 3

SEMINOLE COUNTY

23- 9-5 Grounds, Amerada Pet. and Burke-Greis Oil 1 ..... dry
5- 9-6 Jackson, Barnsdall Oil Co. 2.... 23
11- 8-5 Fee, Magnolia Pet. Co. 2 1060
Cluck, Empire O. & R. Co. 6.. 474
12- 8-5 Weaver, Shaffer O. & R. Co. 3.. 520
Ripley, Twin State Oil Co. 2 .. 409
7- 8-6 Neal, Minnehoma Oil Co. 4 140
26- 7-6 Factor, Carter Oil Co. 3 ..... gas
27- 7-6 Carpenter, Independent O. & G. Co. 2 92
31-10-6 Alexander, Independent O. & G. Co. 1 ..... dry
1- 9-5 Ingram, Superior Oil Corp. 3 .. 510
1- 8-5 Mosar, Gypsy Oil Co. 4 130
11- 8-5 L. Harjo, Sinclair O. & G. Co. 3 570
Cluck, Empire O. & R. Co. 7 .. 765
Coker, Barnsdall Oil Co. 6 500
Coker, Barnsdall Oil Co. 8 115
12- 8-5 Nellie, Tidal Oil Co. 4 700
12- 8-5 Nellie, Tidal Oil Co. 5 655
6- 8-6 N. Barkus, Gypsy Oil Co. 7 947
6- 8-6 Mission, Gypsy Oil Co. 8 800
Mission, Gypsy Oil Co. 9 300
7- 8-6 Hardy, Sinclair O. & G. Co. 4 .. 630
7- 8-6 Maines, Shell Pet. Corp. and Papoose Oil Co. 5 442
7- 8-6 Payne, Independent O. & G. Co. and Kistler 3 735
Payne, Independent O. & G. Co. and Kistler 4 300
Harjoche, Gypsy Oil Co. 4 150
Hardy, Gypsy Oil Co. 5 360
Doser, Gypsy Oil Co. 5 860
18- 8-6 Fuswa, Carter Oil Co. 4 20
24- 7-5 Peterson, I. T. I. Oil Co. 1 ..... dry
23- 7-6 Cotcha, Gypsy Oil Co. 8 1400
26- 7-6 B. Larney, Carter Oil Co. 2 500
27- 7-6 Carpenter, Independent O. & G. Co. 1 2103
24- 5-7 Joanna, Sinclair O. & G. Co. 1.. dry
11- 8-5 Billington, The Prairie O. & G. Co. 8 115
12- 8-5 Nelly, The Prairie O. & G. Co. and T. B. Slick 1 563
26- 7-6 Holman, The Prairie O. & G. Co. 1 ..... gas
26- 6-6 W. Davis, The Prairie O. & G. Co. and T. B. Slick 1 ..... dry
31-10-6 Alexander, Independent O. & G. Co. 2 ..... dry
32-10-6 Varnum, Magnolia Pet. Co. 2 ..1000
6- 9-6 Lottie, Skelly Oil Co. and Atlantic O. P. Co. 3 54
10- 9-6 Community-Jackson, Carter Oil Co. 1 ..... dry
11- 9-6 Community-I. T. I. O., Carter Oil Co. 1 900
1- 8-5 Lawson, Independent O. & G. Co. 2 210
Lawson, Independent O. & G. Co. 3 ..... dry
Lawson, Independent O. & G. Co. 6 100
11- 8-5 Cluck, Empire O. & R. Co. 8 .. 245
Cluck, Empire O. & R. Co. 9 .. 500
13- 8-5 Ripley, Mid-Continent Pet. Corp. 1 445
6- 8-6 N. Barkus, Gypsy Oil Co. 8 4110
N. Barkus, Gypsy Oil Co. 11 ... 972
7- 8-6 Hardy, Gypsy Oil Co. 7 480
18- 7-6 Thompson, Magnolia Pet. Co. 1 dry
23- 7-6 Cotcha, Gypsy Oil Co. 9 1230
19- 7-8 Fish, Empire O. & R. Co. 1 .... gas
18- 9-7 Stubbs, The Prairie O. & G. Co. 1 20
5- 7-7 Thomas, Producers & Refiners Corp. 1 470
17- 9-7 Warrior, Sinclair O. & G. Co. and Marland Oil Co. 2 ..... gas
11- 8-5 Cluck, Empire O. & R. Co. 10.. 576
6- 8-6 N. Barkus, Gypsy Oil Co. 10 .. 260
4- 8-8 McGilbray, McCulloch Oil Co. 1 dry
5- 7-7 Smith, Mid-Continent Pet. Corp. 5 4730
27- 7-6 Carpenter, Independent O. & G. Co. 3 967
23- 5-7 Jefferson, Sinclair O. & G. Co. 1 850
19- 5-8 Lucy, The Texas Company 9 .. 337

Wells completed 65
Production 35,286
Dry 10
Gas 4
Gas production 52,500,000

STEPHENS COUNTY

1-1 -8w Thompson, Hedrick et al 1 .. dry
30-1 -8w Funk, Beaver Oil Co. 1 75
13-1s-4w M. Green, Magnolia Pet. Co. 8 100
13-2s-8w Peck, Magnolia Pet. Co. 4 ... 90
33-1 -8w Williams, Fisher & Rankin 1 dry
34-1s-9w Gunn, Paul Trahan 1 ..... dry
28-1s-8w Taliaferro, Fort Ring Oil Co. and L. Sykes 3 50
2-2s-8w Houston, Pace & Texhoma Oil 2 ..... dry
18-2s-7w Bristowe, Pace et al 2 50
34-1s-8w Kagay, Magnolia Pet. Co. 22.. 18
13-2s-8w Moore, Lesh & McCall 1 .... dry
34-1s-8w Dexter, American Pipe Line Co. 6 75
12-1s-4w Drake "B," Wirt Franklin Pet. Corp. 2 60
2-2s-8w Medley, Ven Mex and Mid-Continent Pet. Corp. 2 80
18-2s-7w Bristowe "A," Pace et al 3 .. 50
13-2s-8w McMasters, Pace et al 4 70

Wells completed 16
Production 718
Dry 5

WAGONER COUNTY

15-18-17 Childers, Ash Brothers 1 ..... gas
3-16-15 Oliver, Wright & Kunkle 2 ... dry
22-16-19 Vann, C. F. Finefield et al 6.. 75
22-18-17 Kidd, Horner et al 2 ..... gas
36-16-17 Brown, Cherokee P. S. Co. 1 .. 20

Wells completed 5
Production 95
Dry 1
Gas 2
Gas production 4,500,000

MISCELLANEOUS COUNTIES

Cotton County—
25-1s-10w Williams, Egger & Wallace 1 7
15-2s-11w Wilson, Cooper & Badgett 1. dry
21-2s-11w Musgrove, Derden & Pruitt 1 dry
2-2s-10w Chalmers, Shasta Oil Co. 2 .. 75
3-2s-10w Priddy, Cullum & Perkins 7.. dry

Jefferson County—
16-7s-5w Peniston, Sigler et al 2 5
16-5s-8w School land, Pearce & Brown 1 dry

Hughes County—
31-9-9 McGirt, Independent O. & G. Co. and Mid-Continent Pet. 1 ... 120
5-6-8 Tiger, Shell Pet. Corp. et al 1 .. dry

Kiowa County—
24-7-17w Miller, Russell & Sloan 1 .... dry
33-6-17w Copple, Burke & Son 1 ..... dry
5-6-15w Weidel, Rymer et al 1 ..... dry
18-6-16w Fuqua, Alexander et al 3 .... dry

Kay County—
36-28-1w School land, Harris & Haun et al 2 ..... dry

Latimer County—
10-6-21 Yancy, La Flore County G. & E. Co. 1 ..... gas

Logan County—
7-19-4w Shepard, Olean Pet. Co. 1 .... dry
20-19-4w Shaffer, J. E. Crosbie 4 3416

Tillman County—
6-2s-15w Smith, Landfair et al 1 .... dry

Garvin County—
16-1-3w Parnell, T. P. C. & O. Co. 1... 37
36-3-3w Barnett, Gilcrease-Douglas Oil Co. 1 ..... dry

Grady County—
11-4-8w Williams, Oklahoma Gas Utilities Corp. 2-A ..... dry
25-4-8w Short, Meridian Gas Co. 2 .... gas

Tulsa County—
18-19-12 Hawkins, Hoss & Glidden Oil Co. 2 ..... dry
3-18-11 Leader, Gray Oil Co. 2-B .... dry
11-18-12 Smith, West Pet. Co. 1-A .... gas

Pawnee County—
26-20-9 Martin, Miller & Strattman 1 .. dry
36-21-8 Byers, Chas. Burton 4 ..... dry
26-20-9 Copeland, Hay et al 2 531

Wells completed 28
Production 4191
Dry 18
Gas 3
Gas production 10,178,000

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	7	640	2	0
Cowley	9	1,093	3	3
Greenwood	12	1,655	4	0
Marion	3	60	1	0

Sedgwick	20	12,048	7	0
Miscellaneous	24	3,755	14	2
Total June	75	19,256	31	5
Total May	73	14,216	33	3
Difference	2	5,040	2	2

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	9	28	37
Cowley	2	20	22
Elk	2	13	15
Ellis	1	8	9
Greenwood	7	18	25
Harvey	0	13	13
McPherson	1	13	14
Marion	2	18	20
Russell	2	6	8
Sedgwick	17	66	83
Sumner	3	11	14
Woodson	1	12	13
Miscellaneous	12	60	72
Total June	59	286	345
Total May	60	302	362
Difference	1	16	17

WELLS COMPLETED

BUTLER COUNTY

17-25-7 Barrett, Lilly & Schreck 1 .... dry
20-26-5 Koogler, Empire O. & R. Co. 79 100
20-26-5 Koogler, Empire O. & R. Co. 80 115
23-26-6 McClellan, Phillips & Shell Pet. 1 .... dry
22-27-5 Brandenberger, Empire O. & R. Co. 6-A 50
Cranston, Empire O. & R. Co. 7 125
27-27-5 Sherrock, Empire O. & R. Co. 2-W 250

Wells completed 7
Production 640
Dry 2

COWLEY COUNTY

20-30-6 Manley, Hall Jones et al 1 .... dry
10-31-3 Smith, Trees Oil Co. 6 30
15-31-3 Morgan, Shawver et al 1 50
24-31-3 Vaught, Shawver et al 1 .... dry
9-32-4 Mitschler, Foster Pet. Co. 1 .. dry
24-33-6 Dobson, Kentucky N. & O. 6.. gas
9-32-4 Mitschler, Prairie O. & G. 1 ..1018
9-32-5 Powers, Krow White 1 .... gas
Cavit, Krow White 1 .... gas

Wells completed 9
Production 1098
Dry 3
Gas 3
Gas production 870,000

GREENWOOD COUNTY

14-24-12 Wayham, Mid-Continent Pet. Corp. 15 5
10-25-8 Kirk, Alladin Pet. Co. 1 .... dry
10-22-10 Pixlee, Phillips Pet. Co. 2 275
36-23-11 Patterson, Empire O. & R. 1... 375
10-22-10 Pixlee, Davis & Haslett 1 .... dry
Pixlee, Henderson & Holden 1. dry
28-26-11 Wiley, Paul E. Parker 1 .... dry
10-22-10 Pixlee, Phillips Co. 3 45
15-22-12 Norton, Empire O. & R. Co. 1-B 115
21-23-11 Lair, Empire O. & R. Co. 2 ... 175
Edwards, Empire O. & R. 13.. 25
Edwards, The Texas Company 3-C 640

Wells completed 12
Production 1655
Dry 4

MARION COUNTY

12-19-2 Suderman, Empire O. & R. 2... 25
12-19-2 Suderman, Shell Pet. Corp. 1.. 35
12-19-2 Suderman, Empire O. & R. 3.. dry

Wells completed 3
Production 60
Dry 1

SEDGWICK COUNTY

36-25-1w Cantrell, Whittaker et al 1... dry
4-25-1 Sherman, Jones & Kirk 1 ... dry
6-26-1 Bright "A," Bu-Vi-Bar Pet. Co. et al 6 85
Lavender, Mortour Oil Co. 2 ..1187
8-26-2w Stroot, Kayser et al 1 .... dry
1-26-1w Carr, Bu-Vi-Bar Pet. Corp et al 1 971
6-26-1 Gorman, Derby Oil Co. 3 1000
18-26-1 Van View, Phillips Pet. Co. 1.. dry
25-28-2 Cook, Shell Pet. Corp. & Tatlock 1 .... dry
22-29-2w Tjaden, Lario Oil Co. 1 .... dry
7-26-1 Vallbrecht, Bu-Vi-Bar Pet. Corp. et al 1 500
1-26-1w Wilson, Skelly Oil Co. & Davis 7 1375
Wilson, Skelly Oil Co. & Davis 6 1305
18-26-1 Community, Flake Oil Corp. 1 dry
1-26-1w Carr, Bu-Vi-Bar Pet. Corp. et al 2 1050
6-26-1 Benningfield, Alladin Pet. Corp. 2 650
Bright "B," Bu-Vi-Bar Pet. Corp. et al 2 950
Bright "B," Bu-Vi-Bar Pet. Corp. 3 700
Gorman, Derby Oil Co. 2 600
14-26-2 Hamant, Gypsy Oil Co. 1 1675

Wells completed 20
Production 12,048
Dry 7

MISCELLANEOUS COUNTIES

Chautauqua County—

12-32-10 Curran, Griffith & Bell 1 ..... dry
31-32-10 McKeown, Edward G. Borge 1. 25
20-34-9 Townsend, Prairie O. & G. 2... dry

Coffey County—

18-23-16 Hutchinson, McCulloch et al 1 dry
6-22-14 Niver, Sheedy et al 1 ..... dry
9-22-14 Rogers, Union Gas Co. 1 ..... dry

Ellis County—

12-13-16w Dechant, Twin Drlg. et al 1.. dry
1-13-16w Wieland, Prairie O. & G. 1.. dry

Russell County—

6-13-15w Leonard, The Texas Co. 1... 55
31-12-15w Brungardt, Mid-West Exp. 6. 240

Elk County—

25-30-9 Logsdon, Hood & Frazier 1 ... gas

Wilson County—

33-29-16 Hyde, Prairie O. & G. 2 ..... gas

Harvey County—

17-23-2 Regier, Fisher Lauck et al 1.. dry
26-24-1 Seaman, Hartman & Skaer 1... dry

Harper County—

24-34-6w Mandeville, Amerada Pet. 1 ... dry

Rooks County—

3-10-16w Kruse, Derby Oil Co. 1..... dry

Rush County—

10-16-18w Legleeter, Phillips Pet. Co. 1. dry

Sumner County—

9-30-3w Latta "B," Champlin O. & R. 4 25
9-30-2w Love, Champlin O. & R. Co. 1. 25
16-35-3w Williams, Gypsy Oil 1 1425
3-35-2 Olsen, Prairie O. & G. 4 1960

Barber County—

27-30-14w Rickens, Rowland et al 1 ... dry

Edwards County—

32-25-19w Tansil, Amerada Pet. Corp. 1 dry

Wells completed 24
Production 3755
Dry 14
Gas 2
Gas production 342,000

WEST TEXAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Borden	2	0	2	0
Coke	1	0	1	0
Crane	3	455	1	0
Culberson	1	0	1	0
Fisher	3	0	3	0
Glasscock	1	237	0	0
Howard	9	1,671	2	0
Irion	2	0	2	0
Jones	6	247	3	0
Lynn	1	0	1	0
Mitchell	2	0	2	0
Pecos	10	20,092	5	0
Ward	3	468	0	0
Reagan	5	750	1	0
Sterling	1	0	1	0
Upton	2	84	0	0
Winkler	12	68,445	0	0
Total June	64	92,449	25	0
Total May	94	183,988	50	2
Difference	30	91,539	25	2

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	S.D.	Ttl.
Crane	5	4	0	9
Crockett	1	1	5	7
Fisher	1	4	3	8
Glasscock	3	4	1	8
Howard	11	18	6	35
Jones	8	13	1	22
Mitchell	0	8	0	8
Pecos	18	24	16	58
Reagan	8	3	4	15
Runnels	0	4	2	6
Upton	1	0	0	1
Ward	1	5	1	7
Winkler	5	22	6	33
Miscellaneous	5	43	31	79
Total June	67	153	76	296
Total May	35	156	91	282
Difference	32	3	15	14

BORDEN COUNTY

Beal, Hyde et al 1 .... dry
Higginbotham et al, Gibson & Johnson 1 dry

COKE COUNTY

Mims, Cates & Dennis 1 .... dry

CRANE COUNTY

Cowden Bros. & Co., C. C. Duffey et al 5 dry
McElroy, Gulf Prod. Co. 61 250
McElroy, Gulf Prod. Co. 62 205

Completions 3
Production 455

CULBERSON COUNTY

Kloh & Rumsey, Deep Rock Oil Co. et al 1 .... dry

FISHER COUNTY

Fleming, Cranfill & Reynolds 1 .... dry
Willingham, Cranfill & Reynolds 2 .... dry
Henry, Dunigan Bros. 1 .... dry

Dry holes 3

GLASSCOCK COUNTY

L. S. McDowell-C, World Oil Co. 1 237

HOWARD COUNTY

Otis Chalk, Hyman, Receiver Sweeney et al 3 35
Scrivner, A. & F. Oil Co. 1 .... dry
Clay-I, Marland Prod. Co. 1 10
Dora Roberts-E, Moody Corp. 12 100
Kloh et al, Plymouth Oil Co. 2 720
Kloh et al, Plymouth Oil Co. 3 650
Settles, Humble Oil & Refg. Co. 1 131
Dora Roberts-E, Moody Corp. 11 25
C. C. Slaughter Co., F. M. Green et al 1 dry

Completions 9
Production 1671
Dry holes 2

IRION COUNTY

Fayette Tankersley, Irion County Drlg. Co. 2 .... dry
Sugg (Lease 1), Fuhrman Pet. Co. 1 .. dry

Dry holes 2

JONES COUNTY

Bickey, Humble Oil & Refg. Co. 1 107
Walters, Phillips Pet. Co. 1 50
Dickenson, Clark et al 1 .... dry
Carter, The Texas Company 6 90
McDonald, Condor Pet. Co. 1 .... dry
Leeson, French 1 .... dry

LYNN COUNTY

May, Miller et al 1 .... dry

MITCHELL COUNTY

Ellwood, Wilson Bros. et al 1 .... dry
Ellwood, H. H. Adams 2 .... dry

Dry holes 2

PECOS COUNTY

Mrs. M. A. Smith, Lease 1, Sec. 21, The California Co. 3 141
Myrtle Sellman, Transcontinental Oil Co. et al 1 .... dry
Trees, Trees Oil Co. 1 .... dry
Gray, Bell et al 1 .... dry
Pecos Valley Oil Co., Black 1 13
Tippett, Moncrief et al 1 .... dry
Smith, Lease 5, Sec. 16, The California Co. 2 18
University, Transcontinental Oil Co. 2.. dry
Smith et al Tr.-B, Gulf Prod. Co. 17 ..4800
Yates-D, Mid-Kansas O. & G. Co. 7 ..15,120

Completions 10
Production 20,092
Dry holes 5

REAGAN COUNTY

University, Big Lake Oil Co. 160 150
University, Big Lake Oil Co. 161 300
University, Big Lake Oil Co. 164 250
University, Big Lake Oil Co. 166 50
University, Skelly Oil Co. 4 .... dry

Completions 5
Production 750
Dry holes 1

STERLING COUNTY

Foster, Geo. L. Miller 1 .... dry

UPTON COUNTY

Ricker, Humble O. & R. Co. 11 49
Shirk, Wentz Oil Co. 5 35

Completions 2
Production 84

WARD COUNTY

Hayzlett, J. H. L. Oil Co. 1 126
Hayzlett, J. H. L. Oil Co. 2 95
Hayzlett, Atlantic & Delmar 2 247

Completions 3
Production 468

WINKLER COUNTY

Ida Hendricks 3-T-67-A, Southern Crude 6 80
Hendricks T-88-M, Southern Crude 32 48,000
Lum Daugherty, Prairie O. & G. Co. 2.. 60
Leck, Shell Pet. Corp. 1 41
Ida Hendrick T-67-F, Southern Crude 5 124
Scarborough, Prairie O. & G. Co. 1 87
Hendricks T-89-J, Southern Crude 8 ... 380
Hendricks T-88-K, Southern Crude 7 ...2328
Hendricks T-88-O, Southern Crude 4 ...5280
Hendricks Tr.-B, Gulf Prod. Co. 21 ..11,145
Hendricks T-88-N, Southern Crude 7 ... 440
Hendricks T-88-O, Southern Crude 3 ... 480

Completions 12
Production 68,445

NORTH CENTRAL TEXAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Archer	71	2,761	34	0
Brown	25	133	21	1
Callahan	4	15	3	0
Clay	7	32	4	0
Coleman	18	862	11	3
Cooke	8	621	1	0
Eastland	15	891	11	1
Erath	2	0	1	1
Grayson	5	0	1	4
Hood	2	0	2	0
Jack	10	935	2	0
Knox	1	0	1	0
McCulloch	1	0	0	1
Montague	3	49	2	0
Palo Pinto	2	0	1	1
Shackelford	26	328	14	0
Stephens	6	60	3	1
Throckmorton	9	55	4	1
Wichita	35	1,115	15	0
Wilbarger	59	5,385	17	0
Young	29	439	19	0
Total June	336	13,711	167	14
Total May	391	13,516	197	22
Difference	53	195	30	8

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	S.D.	Ttl.
Archer	16	32	4	53
Brown	5	13	16	34
Callahan	7	8	1	16
Coleman	6	24	7	37
Cooke	4	7	1	12
Clay	0	3	2	5
Eastland	12	28	3	43
Erath	4	4	4	12
Haskell	1	2	3	6
Jack	6	20	2	28
Montague	0	1	2	3
Palo Pinto	0	10	3	13
Shackelford	2	20	1	23
Stephens	4	17	7	28
Throckmorton	0	4	2	6
Wichita	14	34	5	53
Wilbarger	29	68	24	121
Young	4	18	10	32
Miscellaneous	2	9	8	19
Total June	116	323	105	544
Total May	99	300	134	533
Difference	17	23	29	11

NORTH CENTRAL TEXAS
WELLS COMPLETED
ARCHER COUNTY

Taylor-A, Fain-McGaha Oil Corp. 1.... 135
Thompson, Gwynn-Boyd Drlg. et al 2.. dry
Birdwell, Hi-Land Oil Co. 1.... dry
Wallace, Hines 3.... dry
Parrish Bros., Identity Oil Co. 1.... dry
Coleman, Pet. Producers Co. et al 1.... dry
Jackson, Shappell Oil Co. 47.... 25
Campbell, Wolf & Son 1.... dry
Slopansky, Burns 1.... dry
Logan-A, Continental Oil Co. 2.... 9
Richardson-B, Continental Oil Co. 2.... 205
Slaughter, Hines 1.... dry
Falls C. fee, Humble O. & R. Co. 2.... dry
Williams, Peacock 1.... dry
Phillips Pet. Prod. Co., et al 3.... 30
Richardson, Blk. 13, Prairie O. & G. 2.. 16
Campbell, Rose 1.... dry
Prideaux, Smith 3.... 13
Ward et al, Gulf Prod. Co. 5.... 4
Brown, Brown Farm Oil Co. 4.... 21
Dowlen, Hines 1.... dry
Andrews, Perkins-Cullum et al.... dry
Falls County fee-B, Continental Oil 1.. 83
Neimeyer, Gilliland 4.... 23
Kunkel, Humble O. & R. Co. 2.... 286
Logan-B, Humble O. & R. Co. and Fain-McGaha Oil Corp. 7.... 20
Green-B, Maxson 4.... 5
Falls County fee, Prairie O. & G. Co. 1. 45
Richardson, Blk. 14, Prairie O. & G. 1.. dry
Parrish, Cullum et al 1.... dry
Taylor-A, Fain-McGaha Oil Corp. 2.... 135
Wilson-B, Gohlke 5.... 32
Campbell, Kemrow Prod. Co. 4.... 3
Turbeville, Kruger & Clark 1.... dry
Thom, Long et al 1.... dry
Rutty, Omohundro et al 2.... 12
Wallace, Pandem Oil Corp. 3.... dry
Orton et al-A, Panhandle Ref. Co. 1.... dry
Logan et al, Bridwell Oil Co. et al 1.... 563
Richardson-B, Continental Oil Co. 3.... 65
Roach & Junker, Gilliland-Rosser & Gwynn 2.... dry
Bloodworth, Golding 1.... dry
Graham, Johnson & Fraser 1.... dry
Garvey-G, Johnston 1.... dry
Garrott, Peacock 1.... dry
Phillips, Pet. Prod. Co. et al 4.... 50
Richardson-B, Prairie O. & G. Co. 27.. 15
Andrews, Underwood Drlg. Co. et al 3.. dry
Young, Young 1.... dry
Thompson, Archer Drlg. Co. 3.... dry
Taylor, Brown and United Prod. Co. 2.. 30
Taylor, Brown and United Prod. Co. 3.. 212
McCrory tr.-M, Burns 1.... 35
Taylor-A, Fain-McGaha Oil Corp. 3.... 205
Taylor-B, Fain-McGaha Oil Corp. 1.... dry
Campbell, Kemrow Prod. Co. 5.... dry
Wilson, J. H. Massie 7.... 15
Riggs, Pace 1.... dry
Wallace, Pandem Oil Corp. 4.... dry
Parris-A, Payne et al 4.... 34
Lyles, Shappell Oil Co. 6.... 45
Chilson, Sheldon 2.... 7
Longley, Coleman 1.... dry
Richardson-B, Continental Oil Co. 4.... 66
Falls County School Land, F. P. Cullum et al 2.... 38
Kunkel, Humble O. & R. Co. 3.... 215
Logan-B, Humble O. & R. Co.-Fain-McGaha Oil Corp. 8.... 34
Bishop, T. F. Hunter et al 1.... dry
Richardson, Moran Drlg. Co. and Prairie O. & G. Co. 1.... dry
Richardson, Blk. 13, Prairie O. & G. 3.. 112
Prideaux, W. H. Smith, Jr. 4.... 8

Completions 71
Production 2761
Dry 34

BROWN COUNTY

Miller, Bearman and Barbara Oil Co. 3.. dry
Hill, Duffy et al 1.... dry
Westerman, Pandem Oil Corp. 12.... dry
Duff, Warren et al 2.... 30
Brooks, Anzac Oil Corp. et al 1.... dry
Hensley, Beall-Gully & Michael 1.... dry
Marr-C, Cranfill & Reynolds 1.... dry
Hodnett-A, Humble O. & R. Co. 23.... dry
Hill, Green & Co. 4.... dry
Cross, American Maracaibo Co. 2.... dry
Duff, American Maracaibo 1.... dry
Jones, Anderson 1.... dry
Cross, Buder, trustee 3.... dry
Newton, Humphrey Bros. 9.... dry
Lewis, Liebhart 1.... dry
Henry, Owens, Inc. 1.... dry
White hrs., Baker Bros. 1.... 50
Cason, Sr., Bowers et al 4.... dry
Turner, Campbell et al 2.... dry
Chambers, Ed Curry 4.... 3
McCulley, Greene Prod. Co. 1.... gas
Richardson, Ditto Oil Interests 5.... dry
Barnes, Green & Co. et al 1.... dry
Collier-A, Lloyd Oil Corp. 1.... dry
Thomas, Windsor et al 1.... dry

Completions 25
Production 132
Dry 21
Gas 1
Gas production 1,000,000

CALLAHAN COUNTY

Orvell, Gunn Prod. Co. 1.... 15
Ross est., Oyster & Rife 1.... dry
Harris, Cranfill & Reynolds 1.... dry
Aiken et al, Mook-Texas and Wakefield 1.... dry

Completions 4
Production 15
Dry 3

CLAY COUNTY

Stine et al-C, Mid-Continent Holding 1. 74
American Ref. Properties, American Ref. Properties 3.... dry
Culbertson, Bain 5.... 2½
Evans et al, Belcher et al 3.... 6
White, Allen & Loughrey 1.... dry
Wade, Hamilton et al 2.... dry
Stine et al-B, Mid-Continent Holding 1. dry

Completions 7
Production 32½
Dry 4

COLEMAN COUNTY

House hrs., Gwinnup et al 2.... dry
Davis, Jackson & Veihl 1.... dry
Jennings-C, Cunningham et al 8.... 25
Gill, Samuels 1.... dry
Shore, Stepp & Vandevetter 1.... gas
Overall, Foster 2.... dry
Sealy & Smith, McCamey et al 1.... dry
Shore, Stepp & Vandevetter 2.... gas
Huddleston, Taylor-Link Oil Co. 200
Sindletary, Meredith, Benton & Cameron 1.... dry
Overall, Foster 1.... dry
Keeney-A, Eastland Oil Co. et al 1.... 590
Keeney-B, Eastland Oil Co. and Shell Pet. Corp. 1.... dry
Bennett, Vacuum Oil Co. et al 1.... 40
Moneyhun, Atlantic O. P. Co. and Midsun Oil Corp. 1.... dry
Fuller, Sr., Chapman et al 1.... dry
Sanger Bros., Humphrey Bros. and Union Oil Co. 1.... gas
Shore, Stepp & Keister 4.... dry

Completions 18
Production 862
Dry 11
Gas 3
Gas production 6,024,000

COOKE COUNTY

Dennis, The Texas Co. 3 245
Lester, Big Indian O. & D. Co. 1 20
Poteet, Thornton-Taubert Oil et al 1 17
Timmis-A, Kewanee O. & G. Co. 17 35
Timmis-A, Kewanee O. & G. Co. 18 26
Timmis-A, Kewanee O. & G. Co. 19 110
Poteet, Humble O. & R. Co. 2 168
Hair, Kewanee O. & G. Co. 1 ..... dry

Completions 8
Production 631
Dry 1

EASTLAND COUNTY

Simmons, Conway Bros. and Champion 3 30
Allen est., McLester et al 2 ..... dry
Parker, Mook-Texas Oil Co. 1 ..... dry
Stubblefield, Parsons et al 1 ..... dry
Lewis, Texas Dev. Co. 1 ..... dry
Mills, Gholson et al 1 ..... dry
Morton, Mays et al 1 ..... dry
Holcomb et al, Price 3 ..... dry
Turner, Cranfill & Reynolds 1 ..... gas
Chesley, Dixie Co. 1 ..... dry
McClelland, Superior Oil Co. 2 ..... dry
McDonald, States Oil Corp. 1 ..... dry
Turner, Crabb, McNeil and Canyon O. & G. Co. 1 40
Turner hrs., Owens, Inc., 1 ..... dry
Gray, The Texas Co. and Hoffer 1 816

Completions 15
Production 891
Dry 11
Gas 1
Gas production 250,000

ERATH COUNTY

Cary, Associated Prod. Co. 2 ..... gas
Fulfer, House et al 1 ..... dry

Completions 2
Gas 1
Dry 1
Gas production 3,214,300

GRAYSON COUNTY

Wall, Murchison Oil Co. 2 ..... dry
Utiger, Simpson-Fell Oil Co. 1 ..... dry
Dalton, Sherman Oil Co. 1 ..... gas
Coleman & Peters, McGregor & Jones 1 dry
Guilloud, Murchison Oil Co. 1 ..... dry

Completions 5
Gas 1
Dry 4
Gas production 9,000,000

HOOD COUNTY

Cogdell, Hatfield Pet. Co. 1 ..... dry
Juliff, Sampson Oil Co. 1 ..... dry

Completions 2
Dry 2

JACK COUNTY

Dougherty-A, Bryson O. & G. Co. 1 56
Cullers-Graham est., Buttram Pet. Co. 1 26
Sewell, Owens et al 1 ..... dry
Leffel, Harper 2 247
Shanafelt, Security Drlg. Co. 1 360
Cullers-Sporer, Buttram Pet. Co. 3 16
Leffel, F. H. E. Oil Co. 1 70
Box, Lydecker O. & G. Co. 1 ..... dry
Box, Shaw 1 78
Dougherty, The Texas Co. 1 82

Completions 10
Production 935
Dry 2

KNOX COUNTY

Westbrook, Brummett Bros. 1 ..... dry

McCULLOCH COUNTY

Smith, Roth & Faurot 2 ..... gas

Completion 1
Gas 1
Gas production 2,400,000

MONTAGUE COUNTY

Salmon-C, The Texas Co. 4 ..... dry
Grimes, Paul Roberts 1 ..... dry
Cunningham-A, Bridwell O. Co. and Continental 4 ..... 49½

Completions 3
Production 49½
Dry 2

PALO PINTO COUNTY

Wharton, Brazos River Gas Co. 3 ..... gas
Dalton, Dalton Mark et al 2 ..... dry

Completions 2
Gas 1
Dry 1
Gas production 1,000,000

SHACKELFORD COUNTY

Moberly-B, Cranfill & Reynolds 1 24
Nail, Ritterbush 1 ..... dry
Gillespie, The Texas Co. 1 ..... dry
Lones, Simms Pet. Co. 10 20
Davis, Grisham-Hunter Corp. 2 15
Hill, Harris 2 ..... dry
Proctor, Midland Oil Co. 1 ..... dry
Cook-A, Sec. 88, Roeser & Pendleton and Humble 3 45
Reynolds, Campbell & McDonald 1 ..... dry
Reynolds Castle Co., Less Combeat Oil 1 dry
Moberly-B, Cranfill & Reynolds 2 5
Matthews, Gilman & McMurray 2 7
Flippen, Hogan 1 ..... dry
Matthews, Dull & Earl 8 50
Matthews, Gilman & McMurray 3 7
Diller Bros., Hughes 4 ..... dry
Dyer, Mid-West Explin. Co. 5 ..... dry
Davis, Owens, Inc., et al 1 25
Cook-A, Sec. 83, Roeser & Pendleton and Marland 12 75
Tituc-B, Roeser & Pendleton and Humble 2 20
Titus-B, Roeser & Pendleton and Humble 3 25
Matthews, Slicker 3 ..... dry
Hill, Tannehill et al 4 ..... dry
Matthews-B, Vacuum Oil Co. 1 ..... dry
Lannon, Chas. Wade 1 ..... dry
Davis, Wells et al 1 ..... dry

Completions 26
Production 328
Dry 14

STEPHENS COUNTY

Brooks, Lone Star Gas Co. 1 50
Compton, Lone Star Gas Co. 1 ..... dry
Pierce, Texas Pacific C. & O. Co. 3 10
Morris, Cranfill & Reynolds 2 ..... dry
Grimes, Hanlon Gasoline Co. 1 ..... dry
Hodges, Chestnut & Smith Corp. 1 ..... gas

Completions 5
Production 60
Gas 1
Dry 3
Gas production 1,532,000

THROCKMORTON COUNTY

Overcash, Conway Bros. and Woodson Oil Co. 2 ..... dry
Mathews, Morton et al 1 ..... gas
Ledbetter, Bearman 1 ..... dry
Walker, Profit 1 ..... dry
Titus-A, Roeser & Pendleton and Holder 2 ..... dry
Titus-A, Roeser & Pendleton and Holder 3 40
Titus-A, Roeser & Pendleton and Holder 4 25
Ledbetter, Bearman 2 10
Tuton, Bearman 1 10

Completions 9
Production 85
Gas 1
Dry 4
Gas production 12,000,000

WICHITA COUNTY

Kemp & Kempner, Barclay and Faith Oil Co. 2 ..... dry
Logan, Barclay & White 1 ..... dry
Waggoner-E, Bradstreet 1 ..... dry
Frankl-Cohen & Sawyer, Clark & Bridwell 1 ..... dry
Waggoner Bros., Golding & Cochran 2 .. 92
Waggoner Bros., Golding & Cochran 3 .. 173
McCarty-C, Hammon & Heyser 10 ..... dry
Burnett et al-A, Hines 4 10
Foster & Allen, Howell 1 19
Donehoo, Magnolia Pet. Co. 13 ..... dry
Honaker, Magnolia Pet. Co. 16 6
Reilly, Magnolia Pet. Co. 142 ..... dry
Allen & Kemp, Producers Drlg. Co. 3 .. 14
Michie-A, Riner & Bailey 2-D 55
Michie-B, Riner & Bailey 3 80
McClure, Rubsam & Hunter 5 16
Waggoner Bros., Ven-Mex Oil Co. 18 .. 20
Kemp & Kempner, Wilson Drlg. Co. 5 .. dry
Burnett-A, Hines 5 70
Obenhaus, Newberry et al 1 ..... dry
Burnett-A, Panhandle Ref. Co. 5 78
Hamilton, Ryan Pet. Co. 1 ..... dry
Waggoner Bros., Ven-Mex Oil Co. 19 .. dry
Crudup, G. M. C. Oil Co. 1-B 10
Burnett-A, Panhandle Ref. Co. ..... dry
Michie-A, Riner & Bailey 5 75
Michie-B, Riner & Bailey 4 80
Ferguson, Stump & Heydrick 4 70
Waggoner, The Texas Co. 359 ..... dry
Mitchell et al, Gulf Prod. Co. 5 70
Bishop-B, Coman and Prairie O. & G. 1 dry
Waggoner Bros., Golding Cochran 4 140
McCarty-C, Hammon 14 25
Donehoo, King Royalty Co. 17 ..... dry
Bertha Ramming, Magnolia Pet. Co. 5 .. 22

Completions 35
Production 1115
Dry 15

WILBARGER COUNTY

Waggoner-L, Burton 1 ..... dry
Waggoner, Carter 2 82
Waggoner-N, Consolidated Oil Co. 1 .... dry
Waggoner-W, Fain-McGaha Oil Corp. 3 30
Waggoner, Hammond & Mitcham 1 .... dry
Waggoner, Kelly & Adams 1 ..... dry
Waggoner-A, Knight 1 200
Waggoner-A, Melat Oil Co. 6 70
Parker & Colbert, O'Neil 1 ..... dry
Waggoner-Webb, Robertson et al 2 70
Waggoner, Simpson Fell Oil Co. 1 ..... dry
Waggoner-B, Staley Wynne & Co. 3 165
Waggoner-K, Waggoner Ref. Co. 7 24
Waggoner-L, Waggoner Ref. Co. 4 275
Waggoner-I, Burton 2 293
Waggoner-J, Burton 1 75
Waggoner, Clark et al 2 85
Waggoner-C, Derby Oil Co. 3 130
Waggoner-C, Easter Oil Co. 3 150
Waggoner-C, Empire G. & F. Co. 4 73
Waggoner-S, Fain McGaha Oil Corp. 33 50
Waggoner-H, Golding Cochran et al 5. 100
Waggoner-F, Lawson 1 ..... dry
Waggoner-U, Phillips Pet. Co. 2 87
Waggoner-H, Baker et al 1 ..... dry
Waggoner-O, Consolidated Oil Co. 2 260
Waggoner-B, Cosden Oil Co. 34 ..... dry
Waggoner-B, Empire G. & F. Co. 10 83
Waggoner-N, Fain McGaha Oil Corp. 2 dry
Waggoner-W, Fain McGaha Oil Corp. 4 200
Waggoner-Y, Fain McGaha Oil Corp. 1 100
Smith Waggoner, Grayback Dev. Co. 1. 25
Waggoner-A, Knight 2 235
Waggoner, Maer & Staniforth 1 ..... dry
Waggoner-A, Richfield Oil Co. 1 40
Waggoner-A, Richfield Oil Co. 2 ..... dry
Waggoner-G, Shaw Oil Co. 2 230
Waggoner-G, Shaw Oil Co. 3 175
Waggoner-G, Shaw Oil Co. 4 216
Waggoner-G, Staley Wynne & Co. 3 250
Waggoner-J, Staley Wynne & Co. 1 .... dry
Waggoner-S, Staley Wynne & Co. 1 125
Waggoner-J, Waggoner Ref. Co. 1 220
Waggoner-J, Waggoner Ref. Co. 2 180
Waggoner-I, Burton 3 30
Waggoner-A, Empire G. & F. Co. 5 193
Waggoner-C, Empire G. & F. Co. 6 132
Waggoner-W, Fain McGaha Oil Corp. 5. 200
Waggoner (Boggy Creek), Grayback Dev. Co. 1 230
Waggoner-A, Melat Oil Co. 7 15
Waggoner, O'Neil 1 ..... dry
Waggoner-S, Phillips Pet. Co. 3 58
Waggoner-U, Phillips Pet. Co. 3 46
Waggoner-A, Prairie O. & G. Co. 11 .... dry
Waggoner-G, Shaw et al 1 70
Waggoner-F, Staley Wynne & Co. 7 35
Waggoner-N, Staley Wynne & Co. 1 .... dry
Waggoner, The Texas Co. 363 ..... dry
Waggoner-A, Wilbarger Oil Co. 3 18

Completions 59
Production 5385
Dry 17

YOUNG COUNTY

Richardson, Bradstreet Co. 2 ..... dry
Campbell-B, Continental Oil Co. 9 ..... dry
Johnson, Edmonson 1 ..... dry
Owen, Hawkins et al 2 ..... dry
Deyer, Kimbrell & Lyles 4 2
Keith, McMeans 1 ..... dry
Whitt, Petroleum Prod. Co. 1 25
McKinley, Riggs et al 29 25
Lobban, Stivers & Streeter 1 ..... dry
Edwards, Bratcher 8 ..... dry
Deyer, Kimbrell & Lyles 5 ..... dry
Calvin, Robertson Drlg. Co. 1 ..... dry
Bagley, Underwood Drlg. Co. 1 ..... dry
Prideaux Bros., Bridwell et al 1 ..... dry
McCluer, Hutchens & Jones 1 ..... dry
Langston, Kleiner et al 28 65
Thomas, M. & V. Oil Co. et al 2 ..... dry
Stewart, Ryan & Stastny 1 ..... dry
Garrett, Shappell Oil Co. 6 10
Snider-A, Steed & Gaus 1 ..... dry
Stewart-B, The Texas Co. 2 70
Snider, Wise & Jacksn 1 16
Snider, Wise & Jackson 2 ..... dry
Williams, 28 ac., Forbes et al 1 216
Johnson, Clarida & Bratcher 1 ..... dry
Haygood, Shinola Oil Co. 2 ..... dry
Calvin, Wise & Jackson 9 5
Morrison, Panhandle Ref. Co. 1 ..... dry
Thompson, Shermerhorn O. & G. Co. 5 .. 5

Completions 29
Production 439
Dry 19

SOUTHWEST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Mirando	13	710	4	3	7	27	34
Yoast	3	720	0	0	0	0	0
Joe Bruner	32	12,421	3	1	11	31	42
Saxet	1	0	0	1	0	0	0
Refugio	5	725	1	2	1	21	22
West	1	0	0	1	0	2	2
Miscellaneous	19	0	19	0	15	116	131
Total June	74	14,576	27	8	34	197	231
Total May	93	12,551	38	10	32	190	222
Difference	19	2,025	11	2	2	7	9

WELLS COMPLETED
HUMBLE FIELD—DUVAL

Humble Oil & Ref. Co. 27 ..... abd
Humble Oil & Ref. Co. 24 40

COLE FIELD

O. W. Killam 10 ..... gas
Trussell-Cezeaux-Putman 1 ..... gas

SCHOOLFIELD & O'BYRNE

G. M. Partee 3 200
S. & O. Oil 3 250

CAROLINA-TEXAS FIELD—WEBB

W. R. Shankle 1 100
Trapshooter Reilly 1 100

JENNINGS FIELD—ZAPATA

May & Holder 1 ..... abd
Magnolia Petroleum Co. 1 ..... abd

WILDCATS

Wm. Muckelroy, Jr., 1 20
O. W. Killam 4 ..... abd
John Pappas 1 ..... gas

Wells completed 13
Production 710
Dry 4
Gas 2
Gas production 67,000,000

YOAST—BASTROP

Yoast, Trinity Drillers, Inc. 4 120
Yoast, Atlantic Oil Prod. Co. 6 300
Yoast, The Texas Company 6 300

Wells completed 3
Production 720

JOE BRUNER FIELD—CALDWELL

Gray, Humble Oil & Ref. Co. B-1 ..... abd
Gray, Humble Oil & Ref. Co. C-2 400
Gray, Humble Oil & Ref. Co. A-2 725
Malone, H. J. Powell trustee 2 106
Merriwether, T. C. Hadley 2 30
Tiller, Humble Oil & Ref. Co. C-2 580
Smith, Humble Oil & Ref. Co. B-3 300
Northcut, Humble Oil & Ref. Co. B-2 .. 150
Carter, Gulf. Prod. 13 150
New, Shell Pet. Corp. 5 50
Wright, Humble Oil & Ref. 3 50
Moses & Baggett, Humble O. & R. B-4 350
Tiller, Humble Oil & Ref. A-2 700
Tiller, Humble Oil & Ref. A-4 200
Smith, Shell Pet. 1 1000
Carter, Tips de Armond 2 ..... gas
Smith, Humble Oil & Ref. B-1 ..... abd
Merriwether, T. C. Hadley 1 ..... abd
Tiller, Humble Oil & Ref. B-3 200
Northcut, Humble Oil & Ref. 1 2300
Northcut, Humble Oil & Ref. 1-A 175
Hinds, Humble Oil & Ref. 1 1400
Hanson, Humble Oil & Ref. 4 400
Bridges, Forest Oil 1 100
Northcut, Gulf Prod. 4 125
Tiller, Humble Oil & Ref. B-1 350
Wilson, Lutex Oil 5 155
Bridges, Turman-Brown 1 90
Northcut, Gulf Prod. 3 600
Tiller, Humble Oil & Ref. B-2 300
Moses & Baggett, Humble Oil & Ref. B-3 450
Johnson, Humble Oil & Ref. B-2 500
Dye, Humble Oil & Ref. 1 500

Wells completed 32
Production 12,421
Dry 3
Gas 1
Gas production 2,000,000

SAXET—NUECES

Baldwin, F. P. Zoch 1 ..... gas

REFUGIO—REFUGIO

Holmes Heard, Houston Gulf Gas 4 4
Heard, Mission Drilling 1 200

WEST—ZAVALA

West, Tritex Oil 5 ..... gas

MISCELLANEOUS

Bexar County—
Oppenheimer, Humble Oil & Ref. 2 ..... abd
Martin, W. M. Morgan 1 ..... abd
Gembler, Dingman Drilling 1 ..... abd
Brooks County—
Riley Allen, Milam Drilling 2 ..... abd
Caldwell County—
Cardwell, Alexander & Smith 1 ..... abd
Blundell, United North & South 1 ..... abd
Teas, Al Buchanan et al 1 ..... abd
Calhoun County—
Thomas, B. F. Thompson 1 ..... abd
Colorado County—
Neuendorff, Shell Petroleum 1 ..... abd
Gonzales County—
Staton, W. G. Malone 1 ..... abd
Wilhausen, W. D. Flynn 1 ..... abd
Guadalupe County—
Lowman, Humble Oil & Ref. 2 ..... abd
Jackson County—
Moore, The Texas Company 1 ..... abd
Classen, Wright Bros. 2 ..... abd
Drushell, Wright Bros. 8 ..... abd
Milam County—
Duncan, Rogers & Heep 1 ..... abd
Nueces County—
Carver, F. P. Zoch-Texas Prod. 1 ..... abd
Refugio County—
Rogers, Mission Drilling 3 ..... abd
City of Refugio, Refugio Dev. 1 ..... abd

Wells completed 19
Dry and abandoned 19

PANHANDLE FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	9	1,497	0	3
Gray	20	35,120	1	1
Hutchinson	6	4,202	1	0
Moore	3	30	0	2
Wheeler	6	0	0	6
Total June	44	40,849	2	12
Total May	45	32,193	8	11
Difference	1	8,656	6	1

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	S.D.	Ttl.
Carson	7	21	5	33
Gray	43	73	8	124
Hutchinson	9	16	4	29
Moore	3	7	2	12
Wheeler	11	10	3	24
Miscellaneous	2	10	10	22
Total June	75	137	32	244
Total May	44	92	26	162
Difference	31	45	6	82

WELLS COMPLETED
CARSON COUNTY

Lewis, McIlroy Oil Co. 1 90
Block, Ryan Consolidated Oil Co. 2 125
Bednors, Spartan Oil Co. 1 ..... gas
Quinn, The Texas Company 1 270
Armstrong, Empire G. & F. Co. 1 ..... dry
Burnett, Empire G. & F. Co. 15 ..... gas
Schafer, Skelly Oil Co. 13 540
Schafer, Skelly Oil Co. 14 472
Burnett-L, Marland Prod. Co. 1 ..... gas

Completions 9
Production 1497
Dry 1
Gas 3
Gas production 135,000,000

GRAY COUNTY

Saunders, McMan O. & G. Co. 1 1400
Purviance, Sun Oil Co. 1 918
Purviance et al, The Texas Company 1 925
Chapman-A, The Texas Company 6 435
Back, Travis et al 2 135
McLaughlin, Champlin Refg. Co. 1 560
McConnell, Harrell 1 340
Jackson, Operators Oil Co. 7 14,275
Bowers, The Texas Company 7 8160
Combs-Worley, Wilcox-Pampa Oil Co. 6 126
Lincoln-Saunders, Gardner Bros. & Collins 1 2050
Saunders, The Texas Company 5 128
McConnell, Cockrell McIlroy et al 1 ... 20
Beck, Danciger O. & R. Co. 1 2618
Bowers-A, Gulf Prod. Co. 7 1255
Jackson, Gulf Prod. Co. 1 720
Clayton, The Shamrock Co. 3 1000
Chapman, The Texas Company 2 56
Mongole, B. S. Arnold 1 ..... gas
Jackson, Phillips Pet. Co. 6 ..... dry

Completions 30
Production 35,120
Dry 1
Gas 1
Gas production 77,000,000

HUTCHINSON COUNTY

Johnson Bros.-Florence, Phillips Pet. Co. 5 150
Johnson Bros.-Ford, Phillips Pet. Co. 2. 567
Johnson Bros.-Pulaski, Phillips Pet. Co. 4 402
Sanford-C, Marland Prod. Co. 1 2883
Perkins, Phillips Pet. Co. 4 ..... dry
Moore, Holmes et al 1 200

Completions 6
Production 4202
Dry 1

MOORE COUNTY

Burnett-Stella, Phillips Pet. Co. 1 ..... gas
J. T. Sneed, Jr. (James), Phillips Pet. Co. 3-A 30
Kilgore-A, Canadian River Gas Co. 1 .. gas

Completions 3
Production 30
Gas 2
Gas production 50,000,000

WHEELER COUNTY

Gordon, The Texas Company 2 ..... gas
Bentley, Gibson Oil Co. 7 500
Griswold, Lone Star Gas Co. 1 ..... gas
Ridinger, Lone Star Gas Co. 1 ..... gas
Gooch, Upham Gas Co. 1 ..... gas
Laycock et al, Lela O. & G. Co. 5 150

Completions 6
Production 650
Gas 4
Gas production 130,000,000

GULF COAST

Summary of Field Operations
Texas

Field—	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Barbers Hill	9	6,970	1	0	8	16	24
Batson	4	78	0	0	0	4	4
Big Creek	2	4,000	0	0	0	5	5
Blue Ridge	4	4,570	0	0	1	6	7
Boling	4	0	4	0	0	4	4
Clay Creek	3	0	3	0	0	2	2
Damon Mound	0	0	0	0	0	3	3
DeWalt	3	2,175	0	0	3	6	9
Goose Creek	0	0	0	0	1	3	4
High Island	2	35	1	0	0	3	3
Hull	5	2,230	1	0	0	8	8
Humble	3	1,065	0	0	7	10	17
Liberty	7	318	2	0	2	4	7
Markham	0	0	0	0	0	2	2
Nash	0	0	0	0	0	1	1
North Dayton	0	0	0	0	1	2	3
Orange	5	240	0	0	0	3	3
Orchard	0	0	0	0	0	1	1
Pierce Junct'n	14	9,075	5	0	1	15	16
Raccoon Bend	7	1,302	3	0	6	16	22
Saratoga	3	25	2	0	1	1	2
Sour Lake	2	20	0	0	0	3	3
Spindletop	10	5,000	3	0	0	14	14
West Columbia	0	0	0	0	2	0	2
Misc.	22	2,550	17	1	0	27	27
Total June	119	39,653	42	1	34	159	193
Total May	94	28,801	32	1	18	146	164
Difference	25	10,852	10	0	16	13	29

South Louisiana

Anse La Butte	0	0	0	0	0	1	1
Bayou Bouillon	1	2,000	0	0	0	2	2
Edgerly	3	120	1	0	1	1	2
Hackberry	5	2,550	2	0	0	2	2
Jennings	0	0	0	0	1	4	5
Lockport	2	200	1	0	0	4	4
Sorrento	1	0	1	0	1	0	1
Starks	0	0	0	0	0	2	2
Sulphur	1	0	1	0	1	3	4
Sweet Lake	0	0	0	0	0	1	1
Vinton	3	1,900	1	0	1	4	5
Misc.	12	444	9	1	3	12	15
Total June	28	7,214	16	1	8	36	44
Total May	33	6,041	14	1	11	43	54
Difference	5	1,173	2	0	3	7	10
Total Gulf	147	46,867	58	2	42	195	237
Total May	126	34,342	46	2	29	129	158
Difference	21	12,525	12	0	13	66	79

East Central Texas

County—	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Anderson	3	0	3	0	0	6	6
Angelina	0	0	0	0	0	1	1
Cherokee	2	450	1	0	0	2	2
Falls	2	0	2	0	1	2	3
Freestone	1	0	1	0	0	0	0
Henderson	0	0	0	0	0	1	1
Hill	2	13	1	0	0	0	0
Limestone	2	0	2	0	0	2	2
McLennan	0	0	0	0	0	1	1
Milam	2	0	2	0	1	6	7
Navarro	0	0	0	0	0	1	1
Robertson	0	0	0	0	0	1	1
Rusk	0	0	0	0	0	2	2
Tyler	0	0	0	0	0	1	1
Upshur	0	0	0	0	0	2	2
Van Zandt	2	0	2	0	0	2	2
Total June	16	463	14	0	2	30	32
Total May	9	21	8	0	0	30	30
Difference	7	442	6	0	2	0	2

WELLS COMPLETED

BARBERS HILL—CHAMBERS COUNTY

Smith, Mills Bennett Production Co 1.. 300
Smith, Mills Bennett Production Co. 2.. 1000
Hamman, Mills Bennett Production Co. 1 800
Barbers, Mills Bennett Production Co 1 abd
Kirby, Humphreys Corp. 2-B 100
Chambers, Sun Oil Co. 1 250
Chambers, Sun Oil Co. 2 2400
Feldman, Unice Oil Co. 1 420
Chambers, Yount Lee Oil Co. 6 1700

Wells completed 9
Production 6970
Abandoned 1

BATSON—HARDIN COUNTY

Paraffine, Acorn Oil Co. 70 50
McGoldrick-Stateland, Ada Belle Oil Co. 124 10
Donoho & Cashen, East Batson Oil Co 14 4
Milholm, Hill & McDowell 97 14

Wells completed 4
Production 78

BIG CREEK—FORT BEND COUNTY

Davis, Gulf Production Co. 53 3800
Wheat, The Texas Co. 5 200

Wells completed 2
Production 4000

BLUE RIDGE—FORT BEND COUNTY

West-Schenck, Moody Corp. 6 20
West-Schenck, Moody Corp. 7 1150
Davison, Sinclair Oil & Gas Co. 4 1500
Davison, South Texas Petroleum Co. 1 1900

Wells completed 4
Production 4570

BOLING—WHARTON AND FORT BEND

H. R. Farmer, Sun Oil Co. 4 ..... abd
Bay, H. R. Cullen 6 ..... abd
Thomas, Sun Oil Co. 7 ..... abd
Hill, Union Sulphur Co. 2 ..... abd

Wells completed 4
Abandoned 4

CLAY CREEK—WASHINGTON COUNTY

Schlottman, Sun Oil Co. 1 ..... abd
Grote (J), Sun Oil Co. 2 ..... abd
Schirmer, Sun Oil Co. 2 ..... abd

Wells completed 3
Abandoned 3

DEWALT—FORT BEND COUNTY

Brazos, Humble O. & R. Co. 6 175
Hamner fee, Humble O. & R. Co. 2 1000
Hamner fee, Humble O. & R. Co. 4 1000

Wells completed 3
Production 2175

HIGH ISLAND—GALVESTON COUNTY

Smith, Gulf Prod. Co. 8 ..... abd
Cade, Marrs McLean 11 35

Wells completed 2
Production 35
Abandoned 1

HULL—LIBERTY COUNTY

Morris-Phillips, Gulf Prod. Co. 25 ..... abd
Phoenix, Gulf Prod. Co. 64 10
Dolbear, Republic Prod. Co. 65 450
Dolbear, Republic Prod. Co. 97 1500
Dolbear, Republic Prod. Co. 113 250

Wells completed 5
Production 3230
Abandoned 1

HUMBLE—HARRIS COUNTY

Wheeler-Pickens, Marshall & Hesser 1. 25
Landslide, The Texas Co. 262 500
Landslide, The Texas Co. 264 540

Wells completed 3
Production 1965

LIBERTY—LIBERTY COUNTY

Baldwin, J. W. O'Brien 1 ..... abd
Reviere, Humble O. & R. Co. 4-B 200
Barrett, Mecom Oil Co. 1 20
Baldwin, Navarro Oil Co. 3 50
Gulf Land, Navarro Oil Co. 1 8
Mitchell, Sun Oil Co. 41 ..... abd
Mitchell, Sun Oil Co. 44 40

Wells completed 7
Production 318
Abandoned 2

ORANGE—ORANGE COUNTY

McLean, Brownie-Babbette Oil Co. 8 ... 29
McLean, Brownie-Babbette Oil Co. 12 .. 21
Michael Berwick, Orange Pet. Co. 3 10
Granger, Sinclair O. & G. Co. 5 150
Jackson, Supreme Oil Co. 3 30

Wells completed 5
Production 240

PIERCE JUNCTION—HARRIS COUNTY

Fitzsimmons, J. F. Barron 2 ..... abd
Taylor, Gulf Prod. Co. 29 1200
Fitzsimmons, Gulf Prod. Co. 3 725
Cain, Gulf Prod. Co. 8 750
Whitehead, Moody Corp. 2-A 1500
Hume, Moody Corp. 4 ..... abd
Boyles, Moody Corp. 2 ..... abd
Cain, Navarro Oil Co. 1-B 800
Dooley, Navarro Oil Co. and Humble O. & R. Co. 3 1200
Dooley, Navarro and Texas Explin. 15 1000
Fee, Rio Bravo Oil Co. 4 700
Fitzsimmons, T. G. Shaw and Texas Exploration Co. 2-E 1200
Parsons, Smith et al ..... abd
Meyers, South Texas Pet. Co. 1 ..... abd

Wells completed 14
Production 9075
Abandoned 5

RACCOON BEND—AUSTIN COUNTY

Grawunder, Humble O. & R. Co. and Valley Oil Corp. 2-D ..... abd
Mueller, Humble and Valley 1 500
Stahlbaum, Humble and Valley 1 ..... abd
Ollie Wilson, Humble and Valley 2 292
Washington, Humble and Valley 1-B ... 10
Helmuth, Humble and Valley 1 500
Koehn, Humble and Valley 1 ..... abd

Wells completed 7
Production 1302
Abandoned 3

SARATOGA—HARDIN COUNTY

Sizzler, E. W. Skinner 2 ..... abd
Bradley-Hooks, Weldon Oil Co. 7 25
Baker, West Prod. Co. 1 ..... abd

Wells completed 3
Production 25
Abandoned 2

SOUR LAKE—HARDIN COUNTY

Work-Davis, F. B. Hart 1 12
B. & E., Lake View Oil Co. 3 8

Wells completed 2
Production 20

SPINDLETOP—JEFFERSON COUNTY

McFaddin, Yount Lee Oil Co. 14 300
McFaddin, Yount Lee Oil Co. 49 1200
McFaddin, Yount Lee Oil Co. 73 1600
McFaddin, Yount Lee Oil Co. 104 150
McFaddin, Yount Lee Oil Co. 105 ..... abd
Gladys City, Yount Lee Oil Co. 3 ..... abd
Gladys City, Yount Lee Oil Co. 76 ..... abd
Gladys City, Yount Lee Oil Co. 86 150
Gladys City, Yount Lee Oil Co. 89 500
Gladys City, Yount Lee Oil Co. 92 1100

Wells completed 10
Production 5000
Abandoned 3

MISCELLANEOUS TEXAS

Brazornia County—
Ciemens, Davidson, Meyers et al 3 ..... abd
Burleson County—
Krausse, J. M. Burnham 1 ..... abd
Baker, J. M. Burnham 1 ..... abd
Calhoun County—
Thomas, B. F. Thompson 1 ..... abd
Colorado County—
Werlle, Humble O. & R. Co. 1 ..... abd
McGraw, Humble O. & R. Co. 1 ..... abd
Frazier, Shell Pet. Corp. 1 ..... abd
Fort Bend County—
Needville, Winkleman, South Texas Pet. Co. 1 ..... abd
Harris County—
Mykawa, Irvin, Humble O. & R. Co. 1. abd
Clodine, Paxton et al 1 ..... abd
Jefferson County—
Rohwedder, I. W. Farhar et al 1 ..... abd
Fannette, Bordages, Gulf Prod. Co. 7 ...1000
Fannette, Thomas, Gulf Prod. Co. 11 ... 800
Fannette, Thomas, Gulf Prod. Co. 12 ... abd
Big Hill, Pipkin, The Texas Co. 1 ..... gas
Liberty County—
Hankamer, Boyt, Gulf Prod. Co. 1 700
Montgomery County—
Gay, Harper Drilling Co. 1 ..... abd
Waller County—
Young, The Texas Co. 1 ..... abd
Hannay, Union Explin. Co. 1 ..... abd
Washington County—
Krausse, J. M. Burnham 1 ..... abd
Baker, J. M. Burnham 1 ..... abd
Brenham, Shuerenberg, Butler-Calhoun 2 50

Wells completed 22
Production 2550
Abandoned 17
Gas 1
Gas production 1,500,000

SOUTH LOUISIANA

BAYOU BOUILLON—ST. MARTIN PARISH

State, Rycade Oil Corp. 3 2000
EDGERLY—CALCASIEU PARISH
Lillard, C. M. Crotty 7 55
Hunter, Rex Pet. Co. 9 ..... abd
Wilson, Wilson-Broach 3 85

Wells completed 3
Production 120
Abandoned 1

HACKBERRY—CAMERON PARISH

Valery, Calcasieu Oil Co. 7 1000
Dorion, Calcasieu Oil Co. 6 ..... abd
Watkins, Calcasieu Oil Co. 14 1200
Vincent, Cameron Oil Co. and Rycade Oil Corp. 2 ..... abd
Little, Progressive Oil Co. 1 350

Wells completed 5
Production 2550
Abandoned 2

LOCKPORT—CALCASIEU PARISH

Moss, The Texas Co. 1 ..... abd
Miller, Vacuum Oil Co. 24 200

Wells completed 2
Production 200
Abandoned 1

SORRENTO—ASCENSION PARISH

United Land Co., Gulf Ref. Co. 14 ..... abd

SULPHUR—CALCASIEU PARISH

Fee, Union Sulphur Co. 729 ..... abd

VINTON—CALCASIEU PARISH

Star-Vincent, Gulf Ref. Co. 32 ..... abd
G. & N. Gray, Gulf Ref. Co. 68 500
Matilda Gray, Vinton Pet. Co. 3 1400

Wells completed 3
Production 1900
Abandoned 1

MISCELLANEOUS LOUISIANA

Cameron Parish—
Black Bayou, Watkins, Shell Pet. 10.. 44
Calcasieu Lake, The Texas Co. 3-A ..... abd
Iberia Parish—
Vermillion Bay, The Texas Co. 3-A .... abd
Loreauville, State, Gulf Ref. Co. 9-Z.. abd
Iberville Parish—
Bayou Blue, Wilbert, Standard Oil Co. 2 abd
Bayou Blue, Sherwing, Standard Oil 1 abd
LaFourche Parish—
Thibodaux, Stark, Gulf Ref. Co. 13 .... abd
Thibodaux, Stark, Gulf Ref. Co. 16 .... abd
Plaquemine Parish—
Morris & Rose, Gulf Ref. Co. 1 ..... abd
Garden Island Bay, The Texas Co. 1 .. abd
St. Landry Parish—
Botney Bay, The Texas Co. 2 400
Terrebonne Parish—
Bay Coon Road, The Texas Co. 1-B .... gas

Wells completed 12
Production 444
Abandoned 9
Gas 1
Gas production 93,000,000

EAST CENTRAL TEXAS

ANDERSON COUNTY

Keechi, Douglass, J. S. Cosden et al 2.. abd
Boggy Creek, Todd, Humble O. & R. 2-A abd
Boggy Creek, Neches, Humble O. & R. 1 abd

Wells completed 3
Abandoned 3

CHEROKEE COUNTY

Boggy Creek, Elliott & Clark, Humble O. & R. Co. 2-B 450
Boggy Creek, Holt, Humble O. & R. 1.. abd

Wells completed 2
Production 450
Abandoned 1

FALLS COUNTY

Stiles, Gruver & Stiles 2 ..... abd
Jones, Killiam & Phillips 1 ..... abd
Pucek, Humble O. & R. Co. 1 ..... abd

Wells completed 3
Abandoned 3

FREESTONE COUNTY

Naussbaum, Hoosier et al 1 ..... abd

HILL COUNTY

Johnson, Killiam & Phillips 1 ..... abd
Jones, J. Harper et al 1 13

Wells completed 2
Production 13
Abandoned 1

LIMESTONE COUNTY

Oliver, Donoho & Smith 1 ..... abd
Runnels, Segal et al 1 ..... abd

MILHAM COUNTY

Johnson, Pin Oak Oil Co. 1 ..... abd
Duncan, Rodgers & Heep 1 ..... abd

VAN ZANDT COUNTY

Gilbert, Pure Oil Co. 1 ..... abd
Branson, Pure Oil Co. 1 ..... abd

EAST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rigs	Dig.	Ttl.
Bowie	0	0	0	0	0	1	1
Camp	0	0	0	0	0	1	1
Harrison	5	0	1	4	0	4	4
Panola	3	0	1	2	2	9	11
Red River	6	0	0	0	0	3	3
Shelby	0	0	0	0	0	2	2
Total June	8	0	2	6	2	20	22
Total May	6	25	0	5	4	19	23
Difference	2	25	2	1	2	1	1

*Gas production: Harrison, 4,070,000; Panola, 10,808,000; total, 14,878,000 feet.

HARRISON COUNTY

James Short Sur.: Fuller-Furrh, Nick Barbare 1 ..... gas
E. M. Jenkins Sur.: Saunders, Nick Barbare 2 ..... gas
E. Carroll Sur.: E. T. Rosenborough, M. W. Ellis et al 1 ..... dry
R. W. Bedford Sur.: Hudspeth-Rudd, C. H. Lyons 2 (loc.) ..... abd
W. R. Anderson Sur.: Russ, C. H. Lyons 1 ..... gas
——, M. M. O'Bannion, C. H. Lyons 2 gas

Wells completed 6
Gas 4
Dry and abandoned 2
Gas production 4,070,000

PANOLA COUNTY

James Matthews Sur.: Adams, Adams & Waller 5 ..... gas
B. C. Jordan Sur.: Lula Fletcher, Magnolia Pet. Co. 3 ..... dkd
B. C. Jordan Sur.: Floyd, Natural Gas Products Co. 7 ..... gas

Wells completed 3
Gas 2
Junked 1
Gas production 10,808,000

MISSISSIPPI

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Alcorn	0	0	0	0	0	1	1
Chickasaw	0	0	0	0	0	1	1
Claiborne	0	0	0	0	0	2	2
Hinds*	1	0	1	0	4	3	7
Humphreys	0	0	0	0	0	1	1
Lauderdale	0	0	0	0	2	1	3
Monroe	0	0	0	0	1	6	7
Rankin	1	0	1	0	0	0	0
Warren	0	0	0	0	0	1	1
Webster	0	0	0	0	0	1	1
Yalobusha	0	0	0	0	0	1	1
Total June	2	0	2	0	7	18	25
Total May	0	0	0	0	9	18	27
Difference	2	0	2	0	2	0	2

*Location.

WELLS COMPLETED

HINDS COUNTY

17-16-4w Askew, Frank Henderson et al 1 (loc.) ..... abd

RANKIN COUNTY

2-4n-1e Misterfeldt, Lion Oil Ref. 1.... dry

ARKANSAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rigs	Dig.	Ttl.
Ashley	0	0	0	0	0	1	1
Bradley	1	0	1	0	0	0	0
Calhoun	0	0	0	0	0	1	1
Clark	0	0	0	0	0	1	1
Clay	1	0	1	0	0	0	0
Columbia	0	0	0	0	0	4	4
Faulkner	0	0	0	0	0	1	1
Grant	0	0	0	0	0	1	1
Lincoln	0	0	0	0	0	1	1
Little River	0	0	0	0	0	1	1
Logan	0	0	0	0	0	1	1
Jackson	1	0	1	0	0	0	0
Johnson	1	0	1	0	0	0	0
Madison	0	0	0	0	0	1	1
Nevada	0	0	0	0	0	2	2
Ouachita	3	286	1	0	1	9	10
Union	14	1,345	7	2	8	13	21
Washington	0	0	0	0	0	2	2
White	0	0	0	0	0	1	1
Total June	21	1,631	12	2	9	40	49
Total May	23	693	15	2	12	48	60
Difference	2	938	3	0	3	8	11

*Gas production: Union, 15,000,000 feet.

WELLS COMPLETED

BRADLEY COUNTY

28-16-12 Kline, Phillips Pet. Co. et al 1. dry

CLAY COUNTY

29-21-8 Gossett, Arkmo O. & G. Co. 1.. dry

JACKSON COUNTY

24-10-4w Hugue, Full Moon Pt. Co. 1.. dry

JOHNSON COUNTY

12-10-24 Bynum, Ark. Nat. Gas Corp. 2 dry

OUACHITA COUNTY

27-15-18 Bearden, Ark. Drlg. Co. 1..... dry
27-15-18 Bearden, J. S., Ark. Drlg. Co. 1 (loc.) ..... abd
24-15-18 Henson, Geo. Khouri 1 (loc.).. abd
34-15-15 Scott, Phillips Pet. Co. 1..... 261
28-15-15 Hildebrandt, Simms Oil Co. 11 75

Wells completed 5
Production 286
Dry and abandoned 3

UNION COUNTY

7-15-18 Hill, Grimes Bros. 2..... 20
1-18-15 Rosa Cook, Gulf Ref. Co. 1.... dry
10-17-14 Gregory, H. L. Hunt 7..... 50
7-17-13 El Dorado Realty Co., Lion Oil Ref. Co. 1 ..... dry
4-17-13 Stowe, Lion Oil Ref. Co. 1.... dry
7-17-13 El Dorado Realty Co., Magna Producing Co. 2 ..... dry
11-18-12 Union Sawmill Co., J. O. Moore, trustee 1 ..... dry
12-17-14 L. S. Adams, Ohio Oil Co. 2.... gas
7-17-13 M. H. Nash, Ohio Oil Co. 1.... gas
12-17-14 E. Raulston, Ohio Oil Co. 1.... 360
9-17-14 Perdue, Rovenger Corp. 3-B... *150
7-17-13 Nash, Pure Oil Co. 2..... 765

*9-17-14 Perdue, Rovenger Corp. 2-B... 150
3-16-16 Green, Simmons et al 1..... dry
36-17-16 Goodwin, Standard Oil Co. of La. 1 (drk.) ..... abd

Wells completed 15
Production 1345
Dry 7
Gas 2
Gas production 15,000,000

*With 5,000,000 feet of gas.

WOODRUFF COUNTY

8-5n-2w James, Cotton Plant Oil Tr. 2. dry

NORTH LOUISIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	*Rigs	Dlg.	Ttl.
Bienville	0	0	0	0	0	1	1
Bossier	3	0	1	2	0	8	8
Caddo	13	3,724	4	1	14	29	43
Claiborne	0	0	0	0	2	3	5
DeSoto	2	110	0	0	2	6	8
Franklin	1	0	1	0	0	1	1
Grant	0	0	0	0	0	1	1
Jackson	0	0	0	0	0	1	1
LaSalle	2	70	1	0	1	8	9
Lincoln	0	0	0	0	0	1	1
Morehouse	3	0	0	3	6	4	10
Natchitoches	0	0	0	0	0	2	2
Ouachita	11	0	0	11	7	14	21
Red River	2	67	0	0	1	2	3
Richland	6	0	0	6	12	12	24
Sabine	3	20	1	0	1	4	5
Tensas	1	0	1	0	0	0	0
Union	3	0	0	3	2	11	13
Webster	3	0	1	2	3	11	14
Winn	0	0	0	0	1	0	1
Total June.	53	3,991	10	28	52	119	171
Total May..	39	465	16	18	33	101	134
Difference ..	14	3,526	6	10	19	18	37

*Gas production: Bossier, 5,500,000; Caddo, 5,000,000; Morehouse, 32,910,000; Ouachita, 69,767,000; Richland, 197,283,000; Union, 22,638,000; Webster, 39,971,000; total, 373,069,000 feet.

WELLS COMPLETED
BOSSIER PARISH

11-17-12 Fullilove, Triangle Drlg. Co. 1. gas
35-16-12 Whitehurst, Woodley Pet. Co. 4 gas
25-16-12 Whitehurst, Woodley Pet. Co. 4 dry

Wells completed 3
Gas 2
Dry 1
Gas production 5,500,000

CADDO PARISH

13-21-15 Dillon, Dixie Oil Co. 98..... 11
8-17-16 Bryson, Eastern Carbon Co. 4.. gas
34-21-16 Levee Board, Gulf Ref. Co. 16-A 50
18-19-14 Oden, Gulf Ref. Co. 1..... 3285
18-19-14 Oden, Gulf Ref. Co. 2..... 20
29-20-15 Muslow, Falcon Oil Co. 1-B... 25
1-19-15 Glasbell, Lide & Davidson 1... dry
12-19-15 Liebman, Root Refineries 1.... dry
32-21-15 Muslow, Shreveport Oil Corp. 3 8
7-19-14 Henderson, Standard Oil Co. of La. 1 ..... dry
8-19-14 Hunter, Standard Oil of La. 2.. 75
17-19-14 Hunter, Standard Oil of La. 4. dry
18-19-14 Oden, S.andard Oil of La. 1.. 250

Wells completed 13
Production 3724
Dry 4
Gas 1
Gas production 5,000,000

DESOTO PARISH

12-11-16 Stevens, Carlton Drlg. Co. 2.. 10
28-12-11 Clements, Magnolia Pet. Co. 1 100

Wells completed 2
Production 110

FRANKLIN PARISH

23-15-7 W. Va. Timber Co., Ruston Drlg. Co. 1 ..... dry

LASALLE PARISH

26-10-1e Harper, Gardner, Harter & Brown 11 70
2-10-1e Urania, H. L. Hunt 6-A..... dry

Wells completed 2
Production 70
Dry 1

MOREHOUSE PARISH

17-20-5 Bowles, J. S. Herkness 6..... gas
10-20-4 Sandidge, Nat. Gas Prod. Co. 1 gas
16-20-4 Griffing, Southern Carbon Co. 2 gas

Wells completed 3
Gas 3
Gas production 32,910,000

OUACHITA PARISH

40-20-3 Hunter & McCormick, Interstate Natural Gas Co. 5..... gas
3-19-5 Fee, LaDel Oil Properties 47... gas
7-18-5 Cagle, Mack & Pipes 1..... gas
20-19-5 U. S., Magnolia Pet. Co. ..... gas
18-19-5 U. S., Magnolia Pet. Co. 3..... gas
18-19-4 Frierson, Nemours Corp. 3..... gas
11-20-4 Sandidge Patton, Ouachita Natural Gas Co. 2..... gas
51-20-4 Moore, Peerless Carbon Co. 5.. gas
18-18-5 Fudicker, Pioneer O. & G. Co. 1 gas
49-20-4 Guthrie, United Oil & Natural Gas Co. 4 ..... gas
5-18-4 W. Va., W. Va. O. & G. Co. 7. gas

Wells completed 11
Gas 11
Gas production 69,767,000

RED RIVER PARISH

24-13-11 Kennedy, Gulf Ref. Co. 24.... 70
25-13-11 Robinson, Gulf Ref. Co. 38.... 37

Wells completed 2
Production 67

RICHLAND PARISH

21-16-6 Roberts, Carbon Gas Co. 1 (loc.) abd
16-16-6 W. T. Sartor, Carbon Gas Co. 2 (loc.) ..... abd
28-17-6 Etheridge, S. R. Humble 1..... gas
35-16-6 Kate Humble, International Gas Products Co. 1 ..... gas
29-16-6 M. L. McCoy, Magnolia Pet. 2.. gas
36-16-5 C. M. Noble, Magnolia Pet. 2... gas
20-17-6 Boykin, Northern La. Nat. Gas 1 gas
4-15-6 Tegola, Southern Carbon Co. 1. gas

Wells completed 6
Gas 6
Gas production 197,283,000

*Cratered.

SABINE PARISH

33-10-12 Logan, Ark. Nat. Gas Corp. 13 10
14- 7-14 Bowman-Hicks, R. L. Gray 1. dry
14- 7-14 Bowman-Hicks, R. L. Gray 3. 10

Wells completed 3
Production 20
Dry 1

TENSAS PARISH

39-11-12 Curry Enochs et al 1..... dry

UNION PARISH

26-20-4 Pulfen, Imperial O. & G. Products Co. 1 ..... gas
14-21-3 Hale, Nat. Gas Prod. Co. 2..... gas
12-20-3 Downey, Palmer Corp. 1..... gas

Wells completed 3
Gas 3
Gas production 22,638,900

WEBSTER PARISH

28-21-10 Nelson, La. Oil Ref. Corp. 3.. gas
2-22-11 B. M. Cook, Magnolia Pet. 1.. dry
23-21-10 Ira Cox, Magnolia Pet. Co. 3.. gas

Wells completed 3
Gas 2
Dry 1
Gas production 39,971,000

KENTUCKY-TENNESSEE

KENTUCKY

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Warren	2	1	1	0	0	3	3
Allen	2	0	2	0	0	7	7
Barren	2	0	2	0	0	2	2
Ohio	55	2,886	9	5	4	90	94
Daviess	26	704	7	0	4	58	62
Hancock	3	0	1	2	1	4	5
McLean	0	0	0	0	1	3	4
Henderson	0	0	0	0	0	4	4
Webster	0	0	0	0	0	3	3
Hopkins	0	0	0	0	0	7	7
Muhlenburg	0	0	0	0	0	5	5
Breckenridge	1	15	0	0	1	2	3
Butler	0	0	0	0	1	2	3
Christian	1	10	0	0	0	3	3
Caldwell	1	15	0	0	0	1	1
Adair	0	0	0	0	0	1	1
Cumberland	1	0	1	0	0	2	2
Wayne	0	0	0	0	0	5	5
Powell	0	0	0	0	0	1	1
Estill	1	0	1	0	0	3	3
Morgan	0	0	0	0	0	1	1
Lee-Owsley	2	15	0	0	0	1	1
Wolfe	1	10	0	0	0	1	1
Lawrence-Johnson	1	0	0	1	0	0	0
Johnson-Magoffin	1	10	0	0	0	1	1
Floyd	0	0	0	0	0	4	4
Clay	0	0	0	0	0	1	1
Knox	0	0	0	0	0	1	1
Total June.	100	3,666	24	8	15	216	231
Total May..	115	3,768	37	6	18	208	226
Difference .	15	102	13	2	3	8	5

TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Clay	0	0	0	2	8	10
Jackson	0	0	0	0	2	2
Marshall	0	0	0	1	0	1
Decatur	0	0	0	0	2	2
Total June	0	0	0	3	12	15
Total May.	0	0	0	3	12	15
Difference	0	0	0	0	0	0

WEST TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Fayette	0	0	0	0	1	0	1
Decatur	0	0	0	0	0	2	2
Total June.	0	0	0	0	1	2	3
Total May..	0	0	0	0	1	2	3
Difference ..	0	0	0	0	0	0	0

ALABAMA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Houston	0	0	0	0	0	1	1
Lawrence	0	0	0	0	0	2	2
Lamar	0	0	0	0	0	1	1
Marion	0	0	0	0	1	0	1
Morgan	0	0	0	0	0	1	1
Washington	0	0	0	0	0	3	3
Total June.	0	0	0	0	1	8	9
Total May..	1	0	1	0	1	8	9
Difference ..	1	0	1	0	0	0	0

KENTUCKY-TENNESSEE
WELLS COMPLETED
WARREN COUNTY

Bowling Green—Unknown, Allen Oil & Gas 3 1
John Hudson, McGinley- Randall Supply 3 ..... dry

Wells completed 2
Production 1
Dry 1

ALLEN COUNTY

Scottsville—L. Bean, E. D. Defenbaugh 4 ..... dry
L. Bean, E. D. Defenbaugh 5 ..... dry

Wells completed 2
Dry 2

BARREN COUNTY

Glasgow—Good Night, J. H. Mann & Co. 1 ..... dry
Sampson, Hunt-Leach Oil Co., Sampson 1 ..... dry

Wells completed 2
Dry 2

OHIO COUNTY

Hartford—J. A. Kirk, Ohio Oil 5 50
J. A. Kirk, Ohio Oil 6 50
W. B. Kelley, 105 acres, Ohio Oil 6 40
Greer hrs, James C. Ellis & Co. 1.. 40
Greer hrs, James C. Ellis & Co. 2.. 40
Jane Daniels, James C. Ellis & Co. 15 40
Matt Saddler, James C. Ellis & Co. 2 15
W. T. Bean, Wood Oil Inc. 1..... dry
R. F. Funk, Wood Oil, Inc. 1 50
E. P. Rogers, Wood Oil, Inc. 2..... 10
E. P. Rogers, Wood Oil, Inc. 3 50
L. Trodgen, Hupp, Duff & Co. 7..... 200
L. Trodgen, Hupp, Duff & Co. 8 160
Reat Whittaker, Hupp, Duff & Co. 1 dry
L. Trodgen, C. E. Daugherty & Co. 3 300
L. Trodgen, C. E. Daugherty & Co. 4 400
M. J. Brown, James C. Ellis & Co. 1 dry
H. F. Ford, James C. Ellis & Co. 2.. dry
A. A. Carter, Fred Evans & Co. 1.... dry
Kelley hrs, J. M. Meredith, 10 25
Bob Hamilton, Cumberland Petroleum 18 15
Payton Royal, Ogle & Maxey 3..... 70
Payton Royal, Ogle & Maxey 4..... 100
Ellis Bartlett, James C. Ellis & Co. 2 dry
Gossett, James C. Ellis & Co. 14.... 30
Gossett, James C. Ellis & Co. 15.... 35
W. S. Evans, New Domain O. & G. 1. dry
Joe Norris, Weir & Stewart 1..... 20
Joe Norris, Weir & Stewart 2..... 2
Duke hrs, Snowden-McSweeney 5.... 80
Duke hrs., Snowden-McSweeney 6.... 10
Duke hrs, Snowden-McSweeney 7.... 20
W. A. Hewlett, C. A. Daugherty & Co. 2 ..... dry
L. Trodgen, C. E. Daugherty & Co. 2 60
J. W. Kellem, H. L. Ogle & Co. 2.... 15
H. C. Greer, S. H. Russell & Co 4.... 15
H. C. Greer, S. H. Russell & Co. 5.... 14
Dodson, Henderson, Brand & Co. 2.. 125
G. W. Wedding, Leeper Oil & Dahlgren 1 35
Obie Helm, Leeper Oil 1..... 125
Tom Hamilton, Chester Oil 2 25
Cora Wells, Mecca Oil 23 100
F. R. Howard, Carpenter & Co. 3 150
Mitchell-Birkhead, Carpenter & Co. 5 60
J. L. Stinnett, Rex-Pyramid Oil 8.... 115
J. C. Smith, Wood Oil 10 40
Nancy Farmer, Sirman Co. 17 ..... gas
A. F. Bellamy, Brenner & Adams 4.. dry
T. J. Hoover, J. Leonard Daniel 1 .... gas
W. L. Mills, D. J. White & Co. 2..... 65
M. J. Brown, National Deposit Bank 7 40
Gil Farmer, H. B. Cameron & Co 6.. 20
Unknown, Pampas Oil & Newton 1.. gas
P. R. Kelley, Armis.ead Oil 3..... gas
Guenther-Gant, Jos. B. Mayer 13.... gas

Wells completed 55
Production 2,886
Dry 9
Gas 5

DAVIESS COUNTY

Owensboro—L. M. Powers, Creek Drilling 1 70
J. E. Brown, Creek Drilling 1 .... abd
Dutch Thompkins, Creek Drilling 1.. abd
Lindsay Purcell, Young & Goldburg 3 dry
Hayden hrs., Cumberland Pet. 2..... 25
leum 2 25
R. F. Sands, Wood Oil, Inc. 3 25
First National Bank, Penn-Indiana Oil 4 10
Len Sparks, Whitmer Oil & Gas 3.... dry
Whitesville Bank, Smith, Randolph & Co. 5 20
Whitesville Bank, Smith, Randolph & Co. 6 12
Oscar Wells, Smith, Randolph & Co. 10 60
Geo. W. Wilson, Ray E. Young 1 .... dry
N. J. Cook, S. N. Harreld & Co. 1.... dry
W. L. Barnett, Leeper Oil 7 10
W. A. McCandless, Huff & Calderwood 3 75
Widow Salmon, Huff & Calderwood 7 dry
Salmon, Cumberland Petroleum 2.... 140
S. H. Eas.on, Cumberland Petroleum 5 100
Ed Crow, Thrasher, Brewer & Co 1.. dry
Tony Hansford, The Petroleum 3.... 20
National Bank land, Eastern Gulf Oil 1 7
Aca Bratcher, Hupp, Duff & Co 1... 5
M. G. Huff, Pratt & Co. 2..... dry
S. Hinton, Jetsan Oil & Co. 2 20
S. Hinton, Jetson Oil & Co 3..... 35
S. Hinton, Jetson Oil & Co 4 35
J. L. & N. C. Howard, Johnson & Young 2 20
H. B. Trodgen, Trognite Oil Co 5.... 15

Wells completed 26
Production 704
Dry 7

HANCOCK COUNTY

Pellville—John Burdette, Wentworth Oil 2 ..... gas
Hancock County, Dev., McMahon & Combs 5 ..... gas
P. J. Stephens, H. A. Henry 2 ..... dry

Wells completed 3
Dry 1
Gas 2

BRECKENRIDGE COUNTY

Glendean—R. E. Carmon, McClintock & Reed 1 15

CHRISTIAN COUNTY

Hopkinsville—Mack Croft, A. E. & A. B. Mullen 1 10

CALDWELL COUNTY

Princeton—McNeeley, Missouri-Kansas Pine Line 1 15

CUMBERLAND COUNTY

Bear Creek—Lela King, Smith & Smith 1 ..... dry

ESTILL COUNTY

District 7—Matt Lowrey, Sherm Smith 1 ..... dry

LEE OWSLEY COUNTY

District 16—J. A. Curryn, Ashcraft & Barnes 3 10
District 17—Calmes & Park, Superior Oil Corp 1 5

Wells completed 2
Production 15

WOLFE COUNTY

District 9—E. H. Roberts, Garrison Bros. & Co 5 10

LAWRENCE-JOHNSON COUNTIES

District 1—Belle Queen, Warfield Gas 1 gas

JOHNSON-MAGOFFIN COUNTIES

District 27—Williams hrs, Magoffin Oil Corp 2 10

ROCKY MOUNTAIN AREA

MONTANA

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cat Creek	0	0	0	0	0	1	1
Kevin-Sunburst	25	543	7	4	21	25	46
Pondera	16	1,764	1	0	5	6	11
Miscellaneous.	12	46	1	7	7	68	75
Total June.	53	2,353	9	11	33	100	133
Total May .	24	1,097	3	2	23	102	125
Difference .	29	1,256	6	9	10	2	8

WYOMING

Summary of Field Operations

District or County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Salt Creek	10	743	0	0	2	7	9
Big Horn	0	0	0	0	1	11	12
Carbon	0	0	0	0	0	14	14
Fremont	0	0	0	0	2	10	12
Hot Springs	0	0	0	0	2	3	5
Johnson	1	0	1	0	0	4	4
Lincoln	0	0	0	0	3	6	9
Natrona (exlu. Salt Creek)	1	150	0	0	1	7	8
Park	1	177	0	0	2	33	36
Sweetwater	0	0	0	0	3	14	17
Sublet	3	36	2	0	2	23	25
Uinta	0	0	0	0	6	13	19
Miscl.	0	0	0	0	2	8	10
Total June.	16	1,106	3	0	27	153	180
Total May..	3	118	1	0	25	148	173
Difference .	13	988	2	0	2	5	7

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Fremont	5	400	2	1	0	15	16
Jackson	0	0	0	0	0	6	6
Larimer	0	0	0	0	1	6	7
Las Animas	0	0	0	0	1	1	2
Moffat	2	689	0	1	5	5	10
Pueblo	1	0	1	0	0	14	14
Rio Blanco	0	0	0	0	0	2	2
Routt	1	0	1	0	2	3	5
Yuma	0	0	0	0	0	2	2
Miscl.	0	0	0	0	0	34	34
Total June..	9	1,089	4	1	10	88	98
Total May..	11	720	9	0	17	89	106
Difference ..	2	369	5	1	7	1	8

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Chaves	2	0	2	0	1	4	5
De Baca	0	0	0	0	0	3	3
Eddy	2	0	2	0	9	15	24
Lea	0	0	0	0	19	21	40
McKinley	0	0	0	0	3	9	12
Rio Arriba	0	0	0	0	2	3	5
San Juan	0	0	0	0	4	16	20
Miscl.	0	0	0	0	6	10	16
Total June..	4	0	4	0	44	81	125
Total May..	8	2,466	6	1	42	70	112
Difference ..	4	2,466	2	1	2	11	13

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Total June....	0	0	0	0	4	32	36
Total May....	0	0	0	0	5	27	32
Difference ..	0	0	0	0	1	5	4

MONTANA
WELLS COMPLETED

20-35-1 Zachor, Cosmos Pet. 3 45
25-35-2 Stannard, B. C. Montana 3 ... 120
29-35-1 Maughan, Sweeney Oil Co. 10. 150
22-35-2 Pewters, Texas Pacific 1-A ... 45
29-35-1 Jarrett, "56" Pet. 1 20
19-35-1 Kal.-Kevin, P. M. K. Oils 13.. 30
28-35-2 Lorensen, California Co. 18 .. gas
19-35-2 Seabrook, Sunhen Pet. Corp. 2. 40
18-25-1 Kal.-Kevin, Barmas Prod. Co. . dry
19-35-1 Emmons, Dakota Montana 23. 10
20-35-1 Zachor, Marias River 8 50
17-33-1 Empire, Empire Utilities 2 ... gas
13-34-1 Moore, Moore Drg. Co. ..... gas
28-35-1 Thompson, R. C. Tarrant 3... dry
7-33-1 McKinley, Hannah Porter 1.. dry
36-35-2 State, Texas Pacific 49 5
23-35-3 Sohn, B. A. Arronow 1-B .... dry
9-34-1 Corey, Baker-Barnhill 8 ..... dry
13-34-2 Morton, Campbell et al 4 ... 8
19-35-1 Kal.-Kevin, P. M. K. Oils 14.. 20
11-33-1 Spratt, Franklin Oil Co. 1 .. gas
29-35-2 Kalispel, Texas Pacific 6 ..... dry
12-34-2 Adams, Peerless Dev. Co. 1 .. 10
9-34-1 Barger, Barger Barnhill 9 ... dry
19-35-1 Kal.-Kevin, P. M. K. Oils 15.. 30
16-27-4 State, Fulton Pet. 1 240
10-27-4 Gjullin, Midwest Ref. Co. 22 SW 75
17-27-4 Jones, Midwest Ref. 13 NE.... 125
9-27-4 Jones, Midwest Ref. Co. 33 SW 126
22-27-4 Hirshberg, Ohio Oil Co. 7 75
21-27-4 Monson, Texas Prod. Co. 2 50
15-27-4 Hirshberg, Ohio Oil Co. 6 40
16-27-4 State, Fulton Pet. 7 240

16-27-4 State, Midwest Ref. Co. 21 NE dry
16-27-4 State, Fulton Pet. 5 70
9-27-4 Jones, Midwest Ref. Co. 34 SW 325
16-27-4 State, Pondera Corp. 3 70
16-27-4 State, Kevin Corp. 2 63
16-27-4 State, Kevin Corp. 3 100
16-27-4 State, Fulton Pet. 4 125
22-27-4 Munson, Ohio Oil Co. 4 40
5-25-1 Speer, Hardrock Oil Co. 25
5-25-1 Speer, "56" Pet. Corp. 4 5
6-25-1 Bailey, Archer Montana 1 ... 6
6-25-1 Bailey, Prod. Ind. Oil Co. 1 ... 10
5-37-4 Morrison, Western Nat. Gas Co. dry
32-26-2 Coghill, Ohio Oil Co. 1 ..... dry
3-34-22 Wingert, Ohio Oil Co. 1 ..... dry
25- 9-24 White Oil Co. 1 ..... dry
33-19-12 Judith Basin Oil Co. ..... dry
10- 6-60 Gas Dev. Co. 33 ..... gas
4- 6-60 Gas Dev. Co. 34 ..... gas
26- 8-59 Gas Dev. Co. 20 ..... gas

Completions 53
Production 2353
Dry 9
Gas 11

COLORADO
WELLS COMPLETED

11-19- 70 Vezetti, Continental Oil 4.... 100
2-19- 70 Beltramo, St. Mary's Oil 3... 100
22-20- 69 Marjo, Continental Oil 5..... dry
35-18- 70 Steinmier, Continental Oil 1.. dry
2-19- 70 Beltramo, Table Mesa Oil 1.. 200
16-12-100 State, Mountain Fuel Supply 1 gas
10- 4- 92 Wick, Texas Prod. Co. 5..... 689
3-22- 63 Shaw, Continental Oil 1-A.... dry
31- 7- 85 Hitchins, Morrison & Johnson 1 abd

Wells completed 9
Production 1089
Gas production 1,000,000
Dry and abandoned 4

WYOMING
WELLS COMPLETED

35-40- 79 SE Midwest Oil Co. 6-SD-1... 77
26-40- 79 SW Midwest Oil Co. 16-SD-2. 108
26-40- 79 Midwest Oil Co. 13-SD-2..... 46
23-40- 79 Midwest Oil Co. 31-SD-2..... 113
35-40- 79 Wyo. Associated 24-SD-2..... 56
35-40- 79 NW Wyo. Associated, 19-SD-3 113
23-40- 79 SE Wyo. Associated 19-M.... 60
35-40- 79 NW Wyo. Associated 13-M.... 149
23-40- 79 SE Wyo. Associated, 15-M.... 15
26-40- 79 SE Midwest Oil Co. 15-T 6
10-41- 80 O'Connor, Graves & Murphy 1 abd
3-33- 83 Fargo-Western Oil 8 150
23-58- 98 Kirk-Peters, Midwest Ref. 36. 177
34-27-113 California Pet. Co. 5-L..... 36
27-27-113 California Pet. Co. 3-B-2..... dry
16-26-113 M. J. Goldberg 1 ..... dry

Wells completed 16
Production 1106
Dry and abandoned 3

NEW MEXICO
WELLS COMPLETED

15-12-24 Butler, L. B. Tannehill 1..... dry
27-15-23 Merchant, Snowden & McSweeney 1 ..... dry
6-19-28 State, Flynn, Welch & Yates 56 dry
8-20-29 Cook-Ironsides, Geo. F. Getty 1 abd

Wells completed 4
Dry and abandoned 4

EASTERN FIELDS

Summary of Wells Completed

Fields—	Comp.	Prod.	Dry	Gas
Allegany	42	71	1	0
Bradford	253	418	0	0
Middle Field	10	30	0	0
Venango-Clarion	44	84	1	2
Butler-Armstrong	17	19	5	1
S. W. Penna.	23	54	1	14
West Virginia	71	245	15	27
S. E. Ohio	93	1,756	19	15
Total June	553	2,677	42	59
Total May	473	1,489	33	67
Difference	80	1,188	9	8

Summary of Work Under Way

Fields—	Rigs	Drlg.	Ttl.
Allegany	20	26	46
Bradford	22	115	138
Middle Field	0	2	2
Venango-Clarion	4	25	29
Butler-Armstrong	12	20	32
S. W. Penna.	5	29	34
West Virginia	36	86	122
S. E. Ohio	27	108	135
Total June	127	411	538
Total May	134	414	548
Difference	7	3	10

WELLS COMPLETED
Allegany Field

Goldsmith, Hayward & Brawley 1
Fee, L. W. Shaner et al 2
Fee, C. M. and W. J. Dunning 2
Fee, C. M. and W. J. Dunning 2
Fee, Colegrove Oil 3
Fee, J. A. Bucher 1
Fee, R. J. Dermitt 1
Fee, R. J. Dermitt 1
Fee, M. J. Crowley et al 5
Coast et al, M. J. Crowley et al 5
Fee, Gilligan & Dermitt 5
Fee, O. W. and L. E. Perry 2
Fee, C. H. Lavens et al ..... dry
Fee, A. C. A. Oil Corp. ..... water
J. E. Karl et al, Karl-Weller Oil Corp.. 1
J. E. Karl et al, Karl-Weller Oil Corp.. 1
J. E. Karl et al, Karl-Weller Oil Corp.. 1
Forest Oil Corp., 10 water wells ....pressure
Fee, Mary Lippert 1
Fee, C. M. and F. J. Lippert 2
Volkl fee, Gallets & Buffington 1
Stewart estate, Sepany Oil 5
Fee, N. V. V. Franchot 3
Warters, Minderler & Phillips 1
Fee, Ryder & Richmond Oil 1
Fee, Ryder & Richmond Oil 1
Fee, Ryder & Richmond Oil 1
Fee, Ryder & Richmond Oil 1
Fee, N. V. V. Franchot 15
Harbel, Jacob Meridan 1
Herrick & Shaner, N. V. V. Franchot .. 3
Fee, Garr Oil 1
Carls, J. J. F. Carls et al 1

Wells completed 42
Production 71
Dry 1
Gas and water 11
Rigs, 20; drilling, 26.

Bradford Field

Potter farm J-14, Sloan & Zook Prod. .water
Potter farm T-3, Sloan & Zook Prod. .. 2
Potter farm J-2, Sloan & Zook Prod. ..water
Young farm E-1, Sloan & Zook Oil ..water
Williams farm 144, Duke, Sloan & Zook Oil 2
Williams farm 139, Duke, Sloan & Zook Oil 2
Willets farm WB-9, Sloan & Zook Pet. 1
Willets farm WB-13, Sloan & Zook Pet. 2
Hifler farm O-20, Bradford Prod. Co., Inc. .....water
Hifler farm O-20, Bradford Prod. Co., Inc. .....water
Mitchell farm MC-17, Bradford Prod. Co., Inc. .....water
Forest Oil Corp., 12 oil wells 12
Forest Oil Corp., 7 water wells ....pressure
Forest Pet. Corp., 11 oil wells 11
Forest Pet. Corp., 12 water wells ...pressure
F. P. Lawton 31, Premier Oil 1
Mantz 51, L. F. Kinley et al 2
Bing. 371, 36, Lane No. 1 et al 4
Bing. 412, 8, Daly Oil 2
Bing. 389, 64, D. W. Daly No. 1 3
Bing. 392, Hooper & Elder 1
Bing. 386, 61, Simpson et al 1
Bing. 386, 71, Simpson et al 1
Bing. 386, 72, Simpson et al 1
Bing. 386, 73, Simpson et al 1
Bing. 386, 69, Simpson et al .....water
Bing. 386, 70, Simpson et al .....water
B.ng. 386, 74, Simpson et al .....water
Bing. 464, 29, R. S. Pringle 1
Bing. 369, 74, D. W. Daly No. 2 1
Tract 27, Hazelwood Oil 147 1
Plan A tract 23, Hazelwood Oil 05 ..pressure
Plan A tract 23, Hazelwood Oil 013 .pressure
Plan A tract 23, Hazelwood Oil 157 1
Plan A tract 3 Allegany, Hazelwood Oil A-07 .....pressure
Plan A tract 3 Allegany, Hazelwood Oil A-06 .....pressure
Plan A tract 3 Allegany, Hazelwood Oil 47 1
Plan A tract 3 Allegany, Hazelwood Oil 42 1
Plan A tract 3 Allegany, Hazelwood Oil 1
Plan A tract 3 Allegany, Hazelwood Oil 44 1
Plan A tract 3 Allegany, Hazelwood Oil 49 1
Plan A tract 3 Allegany, Hazelwood Oil A-012 .....pressure
Plan A tract 3 Allegany, Hazelwood Oil A-015 .....pressure
Plan A tract 3 Allegany, Hazelwood Oil A-011 .....pressure
Plan A tract 3 Allegany, Hazelwood Oil 48 1
Plan A tract 3 Allegany, Hazelwood Oil 51 1
Plan A Tr. 23, Hazelwood Oil 163 1
Plan A Tr. 23, Hazelwood Oil 176 1
Plan A Tr. 23, Hazelwood Oil 78 1
Plan A Tr. 23, Hazelwood Oil 146 1
Plan A Tr. 23, Hazelwood Oil 138 1
Plan A Tr. 23, Hazelwood Oil 150 1
Plan A Tr. 23, Hazelwood Oil 168 1
Plan A tract 23, Hazelwood Oil 013 .pressure
Plan A Tr. 23, Hazelwood Oil 143 1
Plan A Tr. 23, Hazelwood Oil 144 1
Plan A Tr. 23, Hazelwood Oil 154 1
Plan A Tr. 23, Hazelwood Oil 120 1
Plan A tract 23, Hazelwood Oil 018 .pressure
Plan A Tr. 23, Hazelwood Oil 019 ..pressure
Plan A Tr. 23, Hazelwood Oil 151 1
Plan A Tr. 23, Hazelwood Oil 152 1
Plan A Tr. 23, Hazelwood Oil 155 1
Bingham 439, S. P. O. 121 1
Bingham 533, S. P. O. 109 1
Bingham 533, S. P. O. 110 1
Bingham 533, S. P. O. 110 1
H. E. Smith, S. P. O. 187 1
H. E. Smith, S. P. O. 188 1
H. E. Smith, S. P. O. 189 1
H. E. Smith, S. P. O. 185 1
Bingham 387, S. P. O. 13 1
Bing.-Satt., S. P. O. 155 1
Bing.-Satt., S. P. O. 154 1
Culberson lots, S. P. O. 82 1
Bingham Johnson, S. P. O. 55 1
Kinzua wells, S. P. O. 191 1
Burdick, S. P. O. 011 .....pressure
Lot 14, S. P. O. A-6 1
Borden, S. P. O. 17 1
Bingham 190-196, S. P. O. 83 1
Dent, S. P. O. 123 1
B. I. Taylor, S. P. O. 37 1
Lee, Halleck & Weston, S. P. O. 107 pressure
Burdick, S. P. O. 010 1
Burdick, S. P. O. 71 1
Hooker, S. P. O. 31 1
Bingham 151-154, S. P. O. 46 1
Borden, S. P. O. 18 1
Burdick, S. P. O. 72 1
Cross, S. P. O. 07 .....pressure
Hooker fee, S. P. O. 2
Riddel estate, S. P. O. 1
Wallace Weston, Jr., S. P. O. 1
Riddell estate, S. P. O. .....water
Fee, Bradford Prod. Co., Inc. .....water
Fee, Bradford Prod. Co., Inc. .....water
Fee, Bradford Prod. Co., Inc. .....water
L. S. Letson, Mr. and Mrs. L. S. Letson. 2
E. J. Burns et al, Bliss Oil 1
Fee, E. Daly 3
Dennis, M. A. Dennis et al 3
Fee, Anna Jane VanTine 3
Fee, D. T. Andrus et al 1
Bingham, D. T. Andrus et al 3
N. V. V. Franchot, Robert Jones 1
N. V. V. Franchot, DeGolier & Nichols.. 1
Fee, J. A. Walters estate 5
N. V. V. Franchot, G. W. Crooks estate 3
N. V. V. Franchot, W. F. Kriz et al ... 2
Fee, South Penn Oil 1
South Penn Oil Co., John Jackson ...water
Fee, Healy Pet. 1
Fee, South Penn Oil Co. 1
Fee, L. G. Dana 3
Fee, Thomas Scroxton & Son 5
Fee, George estate 1
Quintupel Oil Co., Jane Zane estate ... 1
Bingham, Associated Prod. 1
Bingham, Hazelwood Oil 2
Bingham 184, Associated Prod. 2
Bingham 151, South Penn Oil 1
Dent fee, South Penn Oil 7
Bingham 214, Associated Prod. 7
Bingham 214, Associated Prod. 7
Bingham 568, Associated Prod. 10
Bingham 568, Associated Prod. 8
Bingham 547, Alma Byron Collins ...water
Bingham 439, South Penn Oil 4
B.ngham 533, South Penn Oil 2
Bingham 533, South Penn Oil 1
Bingham 570, South Penn Oil 3
Fee, Olean Petroleum 3
Pearl M. Diament, Roy E. Diament 3
Fee, W. C. Kennedy Co. 2
Fee, W. C. Kennedy Co. 1
Kennedy & Clarke, Phoenix Oil 6
Fee, South Penn Oil 10
Bingham 188, Harris Oil 2
Bingham 196, South Penn Oil 10
Bingham 394, Saph & Wright 3
Bingham 390, South Penn Oil 1
Bingham 499, South Penn Oil 1
B.ngham 398, South Penn Oil 2
Bingham 395, South Penn Oil 1
Bingham 472, Grant & Mohan 2
Bingham 406, South Penn Oil .....water
Bingham 576, South Penn Oil 4
Middaugh, A. L. and M. L. Lilly 3
Southerd, A. L. and M. L. Lilly 1
Norton, Kahle Oil 2
Sanderson, A. Schorman 1
Irvine, C. E. Potter 3
Russell, Potter & Devore 3
Gilfillian, J. Wormer 3
Duke, Schopperle 2
Kapp, T. H. Irvine, Jr. 3
Kapp, T. H. Irvine, Jr. 1
Borden, W. B. Miller 2
Ekas, Dallas Oil 4
Bingham, Jones et al 4
Huntington, Denwood Oil 2
Melvin, South Penn 1
Roggenbaum, J. Roggenbaum 2
Simpson, G. A. Simpson 4
Simpson, G. A. Simpson 4
Simpson, G. A. Simpson 4
Simpson, G. A. Simpson 4
Simpson, G. A. Simpson 4
Fee, Hope Oil 3
Jack, H. F. and C. Jack 4
Jack, H. F. and C. Jack 3
Emerson, G. L. Rhodes et al 1
Bingham, H. E. Camp estate 6
Bingham, H. P. McKalip et al .....water
Elder, S. H. Elder & Co. 10
Fee, V. G. Smith 6
Fee, V. G. Smith 5
Campbell, N. V. V. Franchot 7
Rounds, J. W. Kaufman 15
Rounds, J. W. Kaufman 12
Fee, Messer Oil .....water
Fee, Grow Farm Oil .....water
Baker fee, L. M. Lilly 2
Chambers, Schorman & Williams 5
Fee, Mix Creek Oil 1
Fee, Mix Creek Oil .....water
Weston, G. C. Rice et al .....water
Russell, C. E. Potter 4
Fee, L. G. Schenfield 2
Fee, D. J. Moody 2
Melvin, South Penn 1
Melvin, South Penn 1
Melvin, South Penn 1
Melvin, South Penn 1
Melvin, South Penn 1
Whipple, South Penn 1
Whipple, South Penn .....pressure
Enterprise B. & P., South Penn 1
Jones, South Penn 1
Jones, South Penn 1
Jones, South Penn 1
Cotton, South Penn 1
Boocks, F. M. Boocks 1
Borden, W. T. Piper 1
Gilpin, T. P. Thompson, Jr. 1
Stinson, Healey Pet. .....pressure
Stinson, Healey Pet. 1
Stinson, Healey Pet. 1
Willett, L. L. and G. W. Singerland 1
Tract 13, T. H. Kennedy 1
Corwin, Cora M. Simon 1
Shed, Samuel C. Jones 1

Wells completed 253
Production 418
Pressure and water 55

Middle Field

Lot 2, Hickey & Reig 15 7
Brown, L. Epstein 42 5
N. Y. & Dennis Run, R. L. Thomas 14.. 3
Johnson, Clinger Bros. et al 50 10
T. & W., Byers & Hawkey 9 1
McKean, Haskell et al 27 2
Lot 420, Sloan & Zook 54 1
Irvin, J. Bright estate 1
Bauer, H. Anderson 1
McWilliams, Nelson & Anderson 1

Wells completed 10
Production 30

Venango-Clarion

Cunningham heirs, Hutchinson & Eakin 35 1
Crawford, Crawford Gregory Woodburn 82 1
Wike, J. F. Perrine 13 1
Sankey, Harrison & Baird 1 2
Waid, H. C. and L. M. Graham 27 3
McElphatrick & Witherup 25 ..... dry
Scott, Scott Oil 1 1
Fye Bros., M. H. Snyder & Son 9 1
Milton, S. G. Milton 80 1
Seaton, C. W. Seaton 26 1
Seaton, C. W. Seaton 27 1
Huff, R. F. Whitling 19 1
Rembold, S. P. McCalmont estate 1
McKee, C. L. Irwin 5 1
Stiles tract 74, S. Y. Ramage 87 1
Stiles tract 74, S. Y. Ramage 88 1
Tract 82, Brundred Oil 79 1
Tract 82, Brundred Oil 80 1
Tract 82, Brundred Oil 81 1
Cumming, C. B. Kern 10 1
Melford, South Penn 32 1
Goldstein, Morris Goldstein 17 2
Goldstein, Morris Goldstein 12 3
Brown, P. H. Spenstea 13 2
Clark, R. and G. Foggan 29 20
Foster, Smith and O. C. Nat'l. 21 1
Sporer, W. B. and F. E. Kapp 1 2
McLaughlin, Thomas McLaughlin 17 ... 1
Clarion—
Sigworth, Fryburg Motor 1 ..... gas
Keatley, Alum Rock Gas 2 1
Keatley, Alum Rock Gas 3 1
Davis heirs, W. W. Wilson 1 5
Hess, F. J. Crawford 18 1
Hess, Alum Rock Gas 12 3
Christy heirs, South Penn Oil 14 3
Weaver, W. C. Weaver & Sons 4 ..... gas
Detwiller, Alum Rock Gas 5 1
Whitling, J. E. H. and Stanley Whitling 1
Meherton, F. C. Deemer 9 1
Meherton, F. C. Deemer 10 1
Meherton, F. C. Deemer 11 1
Switzer, E. E. Kenemuth 1 1
Galey, E. A. Bream Co. 7 3
McLaughlin & Co., J. M. McLaughlin 13 2

Wells completed 44
Production 84
Dry 1
Gas 2

Butler-Armstrong

Holly, Maley, Little et al 1 ..... gas
McMillan, McMillan, Horton et al 2 .... gas
Raisley, George Thorn et al 1 ..... dry
Raisley, Burton Bros. & Co. 1 ..... dry
Raisley, Pittsburgh O. & G. 1 ..... dry
Raisley, Watson, Ritz & Co. 1 ..... gas
Burtner, T. W. Phillips G. & O. 4 1
Shakely heirs, Gibson O. & G. 1
Moore, J. S. Walker ..... gas
Snow, A. C. Snow et al 1
Cumberland, Campbell & Sherwin 5 1
Bell, T. P. Bell 2 2
Dombart, Lunts & Co. 1 8
Wilson heirs, Garvin & Gettman et al 12 dry
Goubeard, R. J. Steeb et al 1 ..... dry
Byers, Guy Sutton 14 1
Kuhn, South Penn 21 4

Wells completed 17
Production 19
Dry 5
Gas 1

WEST VIRGINIA
WELLS COMPLETED
HARRISON COUNTY

Somerville, Hope Gas Co. 1 ..... dry

MARION COUNTY

Wilson, Owens B. & M. Co. 1 ..... gas

WETZEL AND TYLER COUNTIES

Clarkson, Phila. Oil Co. 1 20
Meighen, Mfrs. L. & H. Co. 1 1
Bowers, So. P. O. Co. 1 1
Kimble, Hennen O. & G. Trust Co. 1 ... 4
McHenry, Mfrs. L. & H. Co. 1 1
Haught, So. P. O. Co. 4 ..... dry
Cole heirs, Pure Oil Co. 3 ..... gas
Monroe, Lowe & Co. 2 ..... gas
Starkey heirs, Starkey Oil Co. 1 5

DODDRIDGE COUNTY

Tingler, Hope C. & R. Co. 8 1
Maxwell, J. R. Trainer & Co. 2 5

RITCHIE COUNTY

Zinn, Hope C. & R. Co. 7 10
Wilson, E. E. Pope 5 2
Tingler, Mid-Penn Oil Co. 2 10
Strusbur Realty Co., Astron Oil Co. 3.. dry
Pierpoint, Bachelor & Co. 4 5
Wilson, So. P. O. Co. 12 5
Tingler, Deem & Co. 1 ..... gas
Rossin, Rexroad & Co. 1 5
Wilson, So. P. O. Co. 18 10
Wilson, So. P. O. Co. 19 40
Mullenax, Reno Oil Co. 12 ..... dry

GILMER COUNTY

Burton, Mudlick O. & G. Co. 1 ..... dry
Hardman, Hope C. & R. Co. 2 2
Amos, So. P. O. Co. 7 25
Riddle Bros., McCall Drilling Co. 1 ... 1
Kelly, Phila. Gas Co. 1 ..... dry

WIRT COUNTY

Daniels, Porter Abbott 1 ..... dry
Gibson, G. B. Vance 44 2
Vernon Tract, W. C. Patterson 38 ..... dry

WOOD COUNTY

McAtee, O. E. Grow 15 8
McAtee, C. D. Smith 5 ..... dry
Russell, C. E. Russell 1 ..... dry
Parkersburg Sand & Gravel Co., Uhl & Co. 1 ..... dry

PLEASANTS COUNTY

Williamson, Neely & Co. 4 3
Westbrook, Knox & Co. 1 ..... dry
Delong, Delong Farm Oil Co. 9 ..... dry
Robinson, Hastings & Co. 1 ..... dry

ROANE COUNTY

Enoch, Heck Oil Co. 1 20

CALHOUN COUNTY

Cunningham, Hope Gas Co. 1 5
Garrett, Calhoun O. & G. Co. 1..... 30
Westfall, Hope Gas Co. 1 ..... dry
Proudfoot, Lewis & Co. 1 5
Rafferty, G. L. Cabot 8 15
Fleming, L. P. Bickel 1 ..... gas
Johnson, W. H. Bickel 1 ..... gas
Hardman, Gerwig O. & G. Co. 11 ..... gas
Simmons, R. J. Crowley 1 ..... gas

LINCOLN COUNTY

H. C. L. & M. Co., U. Fuel Gas Co. 3,910 gas
H. C. L. & M. Co., U. Fuel Gas Co. 2,529 gas
Meadows, C. C. Wolfe 2 ..... gas
H. C. L. & M. Co., United F. G. Co. 2,563 gas
Chambers, Hope Gas Co. 2,241 ..... gas
Adkins, Earl Cameron 4 ..... gas
Alderson, Cameron O. & G. Co. 10 .... gas
Stollings, United F. G. Co. 2,590..... gas

LOGAN COUNTY

Boone County Coal Co., Clendenin Gas Co. 1 2

BOONE COUNTY
Cole-Crane, United F. G. Co. 2,525 .... gas
Price, Martha Oil Co. 2 ..... gas
Alderson, Miller-Lang Co. 3 ..... gas
Safe Deposit Co., Owens Bottle & Machine Co. 8 ..... gas
Traxton, Burgess & Co. 1 2

CABELL COUNTY
Johnson, Harshbarger O. & G. Co. 1 ... gas
Hensley, W. Va. Gas Corp. 21 ..... gas
Wiseman, C. D. N. G. Co. 1 ..... gas
F. Wiseman, Kirtley & Co. 1 ..... gas
Kimbrough, Reishman O. & G. Co. 1 .. gas
Courts heirs, Meabon & Huffman 1 ... gas

MINGO COUNTY
Vance, F. H. Yates 1 ..... gas

Wells completed 71
Production 245
Dry 15
Gas 27

SOUTHWEST PENNSYLVANIA WELLS COMPLETED

BUTLER COUNTY
Palcho, Smith & Co. 2 5
McFarland, Phillips G. & O. Co. 3 ..... gas
Campbell Bros., Rodgers & Co. 1 ..... gas
Gibson, Phillips G. & O. Co. 1 ..... gas
Trees, E. A. Bream & Co. 7 ..... gas
Cole, Phillips G. & O. Co. 1 ..... gas
Betz, Heater & Co. 1 ..... gas

WASHINGTON COUNTY
Lewis, Wasco Fuel Co. 2 ..... gas
Keys, Howe O. & G. Co. 1 10
Marsh, N. G. Co. of W. Va. 1 10

ALLEGHENY COUNTY
Campbell, Sturgeon & Co. 2 5
Snyder, J. P. Martin 1 ..... gas
Schenderman, Carey & Co. 1 ..... gas

BEAVER COUNTY
Reed-Weiss, Laughner O. & G. Co. 1 ... 1
Wightman, Harbison & Co. 1 3
Bradle, Bradle & Co. 1 ..... gas
Schneider, J. P. Martin 1 ..... gas

GREENE COUNTY
Lemley, Moore-Tex. O. Co. 2 ..... dry
Fox, Peoples Gas Co. 1 ..... gas
Lynch, Greensboro Gas Co. 1 15
Longanecker, J. L. Garard 8 5
Hughes, Carnegie Gas Co. 1 ..... gas
Sherk, Phila. Gas Co. 1 ..... gas

Wells completed 23
Production 54
Dry 1
Gas 14

CENTRAL OHIO FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl
Ashland	31	214	15	4	14	24	38
Medina	11	110	2	5	5	5	10
Lorain	5	0	3	2	3	5	8
Wayne	8	0	4	4	4	6	10
Holmes	1	0	1	0	7	6	13
Cuyahoga	1	0	1	0	0	0	0
Ashtabula	0	0	0	0	0	3	3
Richland	3	0	1	2	2	7	9
Knox	4	25	1	2	9	7	16
Coshocton	7	369	0	1	4	4	8
Summitt	10	0	3	7	2	17	19
Licking	11	240	1	2	4	11	15
Muskingum	6	640	0	1	4	16	20
Athens	15	10	6	8	6	19	25
Meigs	9	43	0	2	5	14	19
Jackson	4	0	0	4	14	10	24
Vinton	1	0	1	0	6	4	10
Pickaway	0	0	0	0	0	1	1
Lawrence	0	0	0	0	1	1	2
Gallia	1	0	0	1	0	0	0
Scioto	1	2	0	0	0	0	0
Mahoning	0	0	0	0	0	1	1
Starke	1	0	0	0	1	5	6
Trumbull	0	0	0	0	0	1	1
Columbiana	1	2	0	0	0	1	1
Fairfield	0	0	0	0	0	5	5
Guernsey	6	109	2	1	4	13	17
Belmont	2	5	1	0	0	4	4
Total June.	139	1,769	42	47	95	190	285
Total May.	103	672	31	40	88	160	248
Difference	36	1,097	11	7	7	30	37

WELLS COMLETED ASHLAND COUNTY
Greene—J. H. Van Horn, Ohio Fuel Gas 1-3,527 ..... dry
Orange—C. P. Miller, Ohio Fuel Gas, 2-4,713 ..... dry
O. J. Wiley, Ohio Fuel Gas, 1-4,716 .. dry
P. Hiller, Ohio Fuel Gas, 1-3,518 .... dry
Mary V. Sharrick, Ohio Fuel Gas, 2-3,098 ..... gas
Jackson—Henry Miller, Kemrow Co. 1 gas
Sullivan—A. J. Crile, Logan Gas, 2-3,081 ..... dry
Lake—Ellis A. Morres, Ohio Fuel Gas, 1-3,596 20
D. H. Chandler, Ohio Fuel Gas, 1-3,592 ..... dry
E. M. Paullin, Harry C. Farmer, 1.. 4
W. McFarland, Harmon & Geigher 1 dry
W. A. Mosher, Kemrow Co. 1..... dry
Thos. K. Long, Kemrow Co. 1 ..... dry
John Smith, Robinson & Co. 2 ac., 1.. 52
John Smith 120-a, Robinson & Co. 1 24
Henry C. Young, Robinson & Co. 1.. 8
J. A. Heffelfinger, Robinson & Co. 1 4
J. A. Heffelfinger, Robinson & Co. 2 6
C. I. Sellers, Robinson & Co. 1 2
D. B. Chesrown, Mohican Oil & Gas 3 30
D. B. Chesrown, Mohican Oil & Gas 2 48
Geo. Ullman, B. Slagel 1 ..... dry
A. C. Metcalf, Curtis & Co. 2..... dry
Haerman Shearer, Southern Co. 1.... dry
Mifflin—Upton Andress, Kemrow Co. 1 gas
Mohican—John E. Finley, Logan Gas 2-3,091 ..... dry
Perry—M. Devault, Ohio Fuel Gas, 2-4,725 13
Ed Barnhart, Coast & Co. 4 2
Ed Barnhart, Coast & Co. 5 ..... dry
McKinley-Kime, Robinson & Co. 1.. dry
Montgomery—Belle Wertman, Kemrow Co. 1 ..... gas

Wells completed 31
Production 214
Dry 15
Gas 4

MEDINA COUNTY
Lafayette—Jacob Mong, Ohio Fuel Gas, 2-3,580 ..... gas
Lee A. Goldner, Ohio Fuel Gas, 2-3,580 gas
Westfield—Clyde Steele, Ohio Fuel Gas, 1-983 ..... gas
F. S. Reese, Ohio Fuel Gas, 1-4,710.. gas
Chatham—J. & A. Jalensics, East Ohio Gas, 4 25
T. W. Brinker, Oko Oil & Gas, 23.. 15
Harrisville—Mary Towslee, Ohio Fuel Gas, 2-3,507 ..... dry
W. W. Wood, Harmon & George, 3.. dry
Jos. Funk, Jones & Co. 1 20
Jos. Funk, Jones & Co. 2 50
Medina—Adams Leister, Ohio Fuel Gas, 1-3519 ..... gas

Wells completed 11
Production 110
Dry 2
Gas 5

LORAIN COUNTY
Grafton—E. E. Rice, Ohio Fuel Gas 2-3498 ..... gas
Eaton—Fred L. Nobles, Ohio Fuel Gas, 3-2528 ..... gas
Carlisle—James Malik, Logan Gas, 2-3096 ..... dry
P. Bousack, Daugherty & Co. 1..... dry
Columbia—A. W. Taylor, Ohio Fuel Gas, 1-3403 ..... dry

Wells completed 5
Dry 3
Gas 2

WAYNE COUNTY
Congress—Martin T. Ruff, Ohio Fuel Gas, 1-3534 ..... dry
N. Bonewit, Logan Gas, 1-1390 ..... gas
Clinton—J. H. Metcalf, Curtis & Davidson, 1 ..... gas
Frank Aylesworth, Southern Oil 1.. dry
P. W. Moulter, Brown & Co. 2 ..... dry
Wooster—Chas. Lapeer, Canover & Co. 2 dry
Chester—S. E. Stelzer, Ohio Fuel Gas, 1-3,705 ..... gas
Sugar Creek—Garber & Berg, Logan Gas, 1-3075 ..... gas

Wells completed 8
Dry 4
Gas 4

HOLMES COUNTY
Salt Creek—A. F. Kilgore, Ohio Fuel Gas, 1-3,461 ..... dry

CUYAHOGA COUNTY
Breck—Walsh, Hulse & Kund.z, 1 ..... dry

RICHLAND COUNTY
Monroe—Fred Mengert, Ohio Fuel Gas, 1-3455 ..... gas
Phoebe Herring, Ohio Fuel Gas, 1-3492 dry
Worthington—J. C. Stevens, Logan Gas, 1-3090 ..... gas

Wells completed 3
Dry 1
Gas 2

KNOX COUNTY
Brown—Millie S. Long, Ohio Fuel Gas, 4-3489 ..... gas
D. R. Matthews, Ohio Fuel Gas, 2-3414 gas
Jefferson—H. W. Galehouse, East Ohio Gas, 1 ..... dry
Howard—John Lower, Preston Oil, 1-3496 25

Wells completed 4
Production 25
Dry 2
Gas 2

COSHOCTON COUNTY
Clark—Robert Rhode, Ohio Oil 2..... 125
Frank Mullett, Ohio Oil 2 30
Jess B. Lawrence, Clark Oil 9..... 10
Pike—Levi Norris, Leonard Oil & Gas 4 30
Perry—J. J. Wilson, Preston Oil 2-1295 102
C. Speckman Co., Hulse & Kundtz 1.. 22
Newcastle—Baines, Bell Bros. 1 ..... gas

Wells completed 7
Production 369
Gas 1

SUMMITT COUNTY
Franklin—F. H. Mason, East Ohio Gas 1 gas
Belle Sours, F. A. Brendall & Co. 1.. gas
Frank G. Daily, F. A. Brendall & Co 1 gas
Wm. H. Habel, F. A. Brendall & Co. 1 gas
Bertha Snyder, F. A. Brendall & Co. 1 gas
Greene—Hubert Boettler, F. A. Brendall & Co. 1 ..... dry
F. S. Keefer, East Ohio Gas Co. 1.... gas
Fee, Ohio Stock Food 1 ..... dry
Mary Yarrick, Geo. Eagan 1 ..... gas
Spring—Wm. Dreese, F. A. Brendall & Co. 1 ..... dry

Wells completed 10
Dry 3
Gas 7

LICKING COUNTY
Bowling Green—E. F. Gutridge, Ohio Fuel Gas, 2-2839 ..... dry
Newton—Ed McKinney, North Fork Oil 46 17
Perry—Lillie Loar, Preston Oil 2 8
Jos. Chaney, Hulse & Kundtz 9 40
Ethel Frost, Sterl Brown 3 5
Ethel Frost, Sterl Brown 4 ..... gas
Sarah Rector, Hope Construction & Refg. 3 5
Hanover—Saloma Weaver, Wehrle Gas 1 120
Hopewell—Henry Loughman, Pure Oil 3 40
Madison—S. E. Walpole, Preston Oil 1 5
Licking—Jos. Davis hrs, Helsey Gas 7 gas

Wells completed 11
Production 240
Dry 1
Gas 2

MUSKINGUM COUNTY
Jackson—W. A. Helphrey, Hope Construction & Refg. 7 205
Geo. Crawford, Pure Oil 1 155
Chas. B. Anderson, Pure Oil 1..... 140
Perry—P. E. Arnold, Ohio Fuel Gas, 1-3537 10
H. E. Haines, Palmer & Geisinger 1 gas
Hopewell—Ella Denney, Midland Oil & Gas 3 130

Wells completed 6
Production 640
Gas 1

ATHENS COUNTY
Ames—B. M. Carpenter, Ohio Fuel Gas, 2-3542 ..... gas
O. E. Woolley, Ohio Fuel Gas, 1-3562 gas
Robt. Bean, Chas. Fox & Co. 1..... gas
Robt. Bean, Chas. Fox & Co. 2..... 10
O. M. Lovell, Kiggins & Co. 3 ..... gas
Dover—Sugar Creek Coal, Ohio Fuel Gas, 1-3431 ..... gas
Sunday Creek Coal, Logan Gas, 72-3080 ..... dry
Berne—J. E. Gifford, Ohio Fuel Gas, 1-3520 ..... dry
C. D. Henry, Ohio Fuel Gas, 2-3521.. gas
Geo. A. Harris, Ohio Fuel Gas, 1-3538 gas
Black Diamond Coal, Ohio Fuel Gas, 12-3598 ..... dry
Carthage—Myrtle Runion, Farr & Cody 1 ..... dry
Lodi—Letta V. McLaughlin, Logan Gas, 1-3078 ..... gas
John Buck, Janes-Wysong Gas 1.... dry
Athens—C. H. & J. Kern, Gross & Freebault 2 ..... dry

Wells completed 15
Production 10
Dry 6
Gas 8

MEIGS COUNTY
Sutton—Robt. Crew, Preston Oil 1-948.. 5
W. C. Carnahan, Tyree & Co. 9 5
W. C. Carnahan, Tyree & Co 10..... 5
Thos. Wolf, Cuywood & Palmer 1.... 5
Ray Krauter, Simon Lebow & Co 3 .. 8
David B. Cross, R. C. Miller & Co. 3 10
Scipo—Lydia Rowley, H. W. McTaggart & Co. 2 ..... gas
Bedford—John Heitder, Logan Gas 1-3092 ..... gas
Salisbury—C. G. Greenlee, F. Leifhart 2 5

Wells completed 9
Production 43
Gas 2

JACKSON COUNTY
Franklin—Z. L. Dearing, Ohio Fuel Gas 2-3487 ..... gas
Washington—Jane Cox, Ohio Fuel Gas 2-3373 ..... gas
Lick—Julia Hill, Ohio Fuel Gas 1-3458 gas
Coal—Luck A. Hawks, Ohio Fuel Gas 1-3441 ..... gas

Wells completed 4
Gas 4

VINTON COUNTY
Knox—D. A. Huston, Townsend & Co. 3 dry

GALLIA COUNTY
Addison—Adam Kiser, Gordon Oil 1.. gas

SCIOTO COUNTY
Scioto Trail—Geo. L. Davis, C. L. Williams Oil & Gas 1 2

STARKE COUNTY
Lawrence—Jacob Nichter, Penn Oil & Gas 1 ..... gas

COLUMBIANA COUNTY
Knox—Owen Brooks, George Keil 12.. 2

GUERNSEY COUNTY
CambridgeLenora Black, Ohio Fuel Gas 2-3509 ..... dry
Holley Ashley, Ohio Fuel Gas 1-3524 25
M. L. Spaid, Geo. Jewell & Co 1.... 34
Wheeling—J. C. Alloway, Logan Gas 1-3089 50
Westland—R. O. Galloway, Ohio Fuel Gas 3-3614 ..... dry
Spencer—W. J. Nickle, Ohio Fuel Gas 1-3575 ..... gas

Wells completed 6
Production 109
Dry 2
Gas 1

BELMONT COUNTY
Colerain—J. & M. Davidson, C. D. Crough & Co. 1 ..... dry
Wheeling—S. M. Henderson, Preston Oil 8-1311 5

Wells completed 2
Production 5
Dry 1

SOUTHEAST OHIO WELLS COMPLETED

MONROE COUNTY
Windland, Sylvania Producing Co. 2.... 25
Nessz, Denbow & Co. 1..... dry
Givens, Sylvania Producing Co. 7..... 3
McElfresh, S. A. Cobb 1..... gas
Burkhart, Paine & Co. 1..... 10

PERRY COUNTY
Poling, Elder & Co. 1..... gas
Householder, J. Elder 1..... dry
Nummel, Preston Oil Co. 1..... gas
Palmer, Planet O. & G. Co. 1..... gas
H. V. P. Co., Chartiers Oil Co. 211..... 75
Gabriel, Ohio F. G. Co. 1..... 80
Burley, Ohio F. G. Co. 1..... gas
Moore, Ohio F. G. Co. 1..... gas
May, Ohio F. G. Co. 1..... gas
Combs, Ohio F. G. Co. 1..... 55
Baker, Pure Oil Co. 3..... gas
Moore, Ralph Bros., Inc. ..... gas
Wilson, Preston Oil Co. 2..... 30

HOCKING COUNTY
Riggs, Ennis Bros. 1..... dry
Stone, Gordon Oil Co. 9..... 25
Stone, Gordon Oil Co. 10..... 60
Meldrim hrs., Gordon Oil Co. 1..... 55
Goodwin, Gordon Oil Co. 1..... 25
Roher, Ohio Fuel Gas Co. 2..... gas
Burgess, Brownlee O. & G. Co. 1..... 50
Woodruff hrs., Perry Sturm & Co. 5.... 5
S. C. C. Co., Preston Oil Co. 71..... dry
Harden, Preston Oil Co. 5..... 10
Berry, Preston Oil Co. 1..... 10
Mercer, Hope C. & R. Co. 2..... 170

GUERNSEY COUNTY
Alleway, Logan Gas Co. 1..... 50
Black, Ohio F. G. Co. 1..... dry
Ashley, Ohio F. G. Co. 1..... 25
Spaid, Jewell & Co. 1..... 35

MUSKINGUM COUNTY
Crawford, Pure Oil Co. 5..... 15
Anderson, Pure Oil Co. 1..... 90
Arnold, Preston Oil Co. 1..... 90
Harry hrs., Palmer & Co. 1..... gas
Denny, Midland Oil Co. 2..... 130
Gutridge, Ohio F. S. Co. 3..... gas

COSHOCTON COUNTY
Mullett, Ohio Oil Co. 2..... 40
Rhode, Ohio Oil Co. 2..... 50
Brooke, Geo. Kiel 12..... 2

LICKING COUNTY
Chaney, Kundtz-Hulse Co. 9..... 5
Rector, Hope C. & R. Co. 2..... dry
Helphrey, Hope C. & R. Co. 7..... 205
Helphrey, Hope C. & R. Co. 9..... 25
Loughman, Pure Oil Co. 1..... 40
Weaver, Wehrle Co. 1..... 60
Walpole, Preston Oil Co. 1..... 1

VINTON COUNTY
Houston, Townsend & Co. 1..... dry

NOBLE COUNTY
Williams, Miller & Co. 7..... 1
Green, King & Co. 1..... dry
Mullett, Cain O. & G. Co. 5..... dry

ATHENS COUNTY
Karnes, Gross & Frebault 1..... dry

MORGAN COUNTY
Rabberman, Skip.on Farm Oil Co. 1.... gas

MEIGS COUNTY
Crew, Preston Oil Co. 1..... 5
Carnahan, 5 Oil Assn. 9..... 5
Carnahan, 5 Oil Assn. 10..... 5
Cross, Miller & Co. 2..... 5

WASHINGTON COUNTY
Jones hrs., Sheets Run Oil Co. 1..... dry
Myers, Knowlton & Co. 5..... gas
Hall, Blair & Co. 1..... 1
Leasure, Turney & Co. 3..... 3
Armstrong, Newhart & Co. 1..... 3
Wilson, Wilson & Co. 4..... 1
Plumer hrs., Crescent Prod. Co. 35..... 1
Mendenhall, Mendenhall & Co. 1..... 1
Hall hrs., Southern Oil Co. 10..... dry
Meister-Blair, Meister & Blair 2..... 3
Lehmer, First Natl. Bank 64..... 3
Bergen, W. Reader 21..... dry
Smith, Shay, McMullin & Co. 1..... gas

JEFFERSON COUNTY
Philips-Reimer, Gordon & Co. 1..... dry
Richards, Thompson & Co. 1..... dry

BELMONT COUNTY
Henderson, Preston Oil Co. 8..... 10

ASHLAND COUNTY
Devinney, Robinson & Co. 4..... 10
Smith lot, Robinson & Co. 1..... 20
J. Smith, Robinson & Co. 1..... 10
Sellars, Robinson & Co. 1..... dry
Young, Robinson & Co. 1..... 5
Heffelfinger, Robinson & Co. 1..... 6
Morris, Robinson & Co. 1..... 5
Ullman Bros., Brown & Co. 1..... dry
Sprang, Cleveland Oil Co. 1..... dry
Metcalf, Curtis & Co. 1..... dry
Lower, Pres.on Oil Co. 1..... 30
Chesrown, Mohican O. & G. Co. 2..... 16
Chesrown, Mohican O. & G. Co. 3..... 8

MEDINA COUNTY
Brinkley, O. K. O. O. & G. Co. 23..... 15
Arnold, East Ohio Gas Co. 3..... 25
Funk, Ray Jones 1..... 30
Funk, Ray Jones 2..... 25

Wells completed 93
Production 1758
Dry 13
Gas 15

LIMA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl
Wood	3	13	1	0	1	2	3
Hancock	4	60	0	1	1	3	4
Allen	4	75	0	0	0	3	3
Auglaize	0	0	0	0	1	1	2
Sandusky	0	0	0	0	0	3	3
Mercer	1	0	1	0	0	3	3
Van Wert	1	8	0	0	0	0	0
Seneca	7	380	3	0	0	4	4
Shelby	0	0	0	0	0	1	1
Wyandot	1	0	0	1	1	0	1
Huron	0	0	0	0	0	2	2
Total June.	21	536	5	2	3	22	26
Total May.	11	74	2	2	3	26	29
Difference	10	462	3	0	0	4	3

WELLS COMPLETED WOOD COUNTY
Liberty—W. W. Mercer, Napoleon Oil Synd. 3 12
Perrysburg—Catherine Smith, Geo. L. Haubert & Co. 5 1
Perry—Henry Brandeberry, Glass & Shellenberger 2 ..... dry

Wells completed 3
Production 13
Dry 1

HANCOCK COUNTY
Liberty—County Infirmary, Byron Porter 1 3
Eagle—Alice Stauffer, Star & Clark 12. 15
Biglick—Alva Beard, Robt. Mitchell, Trust 3 40
Delaware—O. S. Bell, Watts & Harmon 2 ..... gas
Allen—I. N. Whetstone, Ohio Oil 14... abd
Portage—John E. Moorhead, Ohio Oil 4 abd

Wells completed 4
Production 60
Gas 1
Abandoned 2

ALLEN COUNTY
Bath—J. M. Miller, H. F. Kelly & Co. 6 10
Wm. H. Hall, B. L. Carman & Co. 5.. 30

Philo Bassett, Neely & Nolan 5 15
E. F. Sandy, C. A. & F. J. Peavy 1.. 15

Wells completed 4
Production 75

MERCER COUNTY

Center—Floyd L. Purdy, Wm. B. Lawrence & Co. 2 ..... dry

VAN WERT COUNTY

York—Margaret Hiller, John Elias 4.. 8

SENECA COUNTY

Liberty—A. Fletchner, August Oil 3... 7
J. Hunter, Sun Oil & Co 5..... dry
W. C. Rosenberger, Feasel & Co. 1... dry
Pleasants—Chas. B. Miller, J. H. Murphy & Sons 1 360
Ida M. Rosenberger, T. F. O'Brien & Co. 1 ..... dry
Jackson—T. H. Ropp, Columbus-Tiffin Oil & Gas 3 8
J. L. Newson, Columbus-Tiffin Oil & Gas 1 5

Wells completed 7
Production 380
Dry 3

WYANDOT COUNTY

Richland—Carrie Pickett, Warton Oil & Gas 1 ..... gas

INDIANA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl
Adams	2	40	0	0	0	3	3
Delaware	1	0	1	0	0	0	0
Gibson	1	40	0	0	0	2	2
Pike	2	50	0	1	0	2	2
Daviess	1	0	1	0	0	1	1
Vigo	0	0	0	0	0	2	2
Sullivan	1	20	0	0	0	4	4
Spencer	2	45	1	0	0	5	5
Perry	1	0	1	0	4	5	9
Dubois	0	0	0	0	0	2	2
Warrick	1	0	1	0	0	2	2
Knox	0	0	0	0	0	1	1
Benton	0	0	0	0	0	1	1
Fountain	0	0	0	0	0	1	1
Monroe	1	0	1	0	0	0	0
Greene	0	0	0	0	0	2	2
Crawford	0	0	0	0	0	1	1
Posey	0	0	0	0	0	1	1
Vandeburg	0	0	0	0	0	1	1
Lagrange	0	0	0	0	0	1	1
Starke	1	0	1	0	0	0	0
Martin	0	0	0	0	0	1	1
Johnson	0	0	0	0	0	1	1
Putnam	0	0	0	0	0	1	1
Morgan	0	0	0	0	0	1	1
Madison	0	0	0	0	1	0	1
Marion	1	0	1	0	0	0	0
Marshall	0	0	0	0	1	0	1
Shelby	0	0	0	0	0	1	1
Total June.	15	195	8	1	6	42	48
Total May..	14	115	8	3	7	46	53
Difference ..	1	80	0	2	1	4	5

WELLS COMPLETED
ADAMS COUNTY

Jefferson—Otto Baker, Geo. S. Lacknett & Co. 2 30
Wabash—Clark Stanley, Scoofakes & Hefflin 4 10

Wells completed 2
Production 40

DELAWARE COUNTY

Liberty—Harley DeMoss, F. E. Rickow 1 dry

GIBSON COUNTY

Barton—J. D. Williams, Rodgers & Randall 3 40
Washington—Alice Fredericks, Murphy Oil 11 ..... abd
Jas. Young, R. D. Randall 1 ..... abd
J. W. Phillips, United Oil Corp 1 2 3 abd

Wells completed 1
Production 40
Abandoned 5

PIKE COUNTY

Clay—Della Kime, Chas. C. Talliaferro, Jr. 2 50
Washington—Lew George, Chas. C. Talliaferro, Jr. 1 ..... gas
Patoka—Harlan L. Kayx, Ohio Oil 9 .. abd
Madison—Ray E. Gladish, Murphy Oil 1 abd
Oil 1 ..... abd

Wells completed 2
Production 50
Gas 1
Abandoned 2

DAVIESS COUNTY

Veale—Tillman Gaither, L. L. Gee & Co. 2 ..... dry

SULLIVAN COUNTY

Fairbanks—C. W. Scott, Chas. W. Scott 2 20
Albert Poe, H. & S. Oil & Gas 1 2 3 4 5 abd
Isaac Harman, Wm. C. Kennedy Co. 2 2 ..... abd
Nancy A. Denny, V. S. Welch & Co. 6 abd
John T. Wilson, V. S. Welch & Co. 1 abd

Wells completed 1
Production. 20
Abandoned 9

SPENCER COUNTY

Ohio—Wm. Bretz, Ellis & Young 1 ... dry
Section 35—Geo. Cissna, E. M. Treat & Co. 1 45

Wells completed 2
Production 45
Dry 1

PERRY COUNTY

Troy—Henry Devillez, Packard Oil 1.. dry

WARRICK COUNTY

Near Gentryville—Wm. Walters, E. M. Treat & Co. 1 ..... dry

MONROE COUNTY

Clear Creek—John Fox, Saddle Creek Oil 1 ..... dry

STARKE COUNTY

California—Wm. B. Lewis, The Tawa Oil 1 ..... dry

MARION COUNTY

Oklandon—Town lot, Oklandon Gas & Oil 1 ..... dry

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Clark	0	0	0	0	3	3
Crawford	3	58	0	1	3	4
Lawrence	1	55	0	1	2	3
Wabash	2	10	1	0	4	4
St. Clair	10	971	0	0	17	17
Effingham	0	0	0	0	1	1
Clay	1	0	1	0	0	0
Saline	0	0	0	0	4	4
Total June ..	17	1,094	2	2	34	36
Total May ..	14	1,259	4	1	21	22
Difference ..	3	165	2	1	13	14

WELLS COMPLETED
CRAWFORD COUNTY

Licking—Marks & Croft, Walter Squires & Co. 6 1
Prairie—John Ackerman, Grant Jessup 1 50
Martin—C. L. Petty, W. C. McBride, Inc. 2 7

Wells completed 3
Production 58

LAWRENCE COUNTY

Dennison—J. W. Clark No. 2, Ohio Oil 14 55
Bridgeport—J. M. Atkins, Ohio Oil 2 3 abd
H. P. Shepherd, Ohio Oil 3 5 ..... abd

Wells completed 1
Production 55
Abandoned 4

WABASH COUNTY

Wabash—W. M. Price, Ridge Farm Oil & Gas 8 10
Ed Wright, Haven & Co. 1 ..... dry

Wells completed 2
Production 10
Dry 1

MARION COUNTY

Contralia—George, Jess Conge 1 ..... abd

ST. CLAIR COUNTY

Sugar Loaf—H. Mansette, Morris & Yeager 2 90
Alice Dettenbach, Morris & Yeager 2 159
High School lot, Ava O. & G. 1..... 110
High School lot, Ava Oil & Gas 2.. 30
Matilda Dyroff, Ohio Oil 3 45
Hall & Weihl, Ohio Oil 1..... 66
J. W. Hamilton lot, St. Clair County Oil 1 220
Dupo Lumber & Hardware, L. G. Blackman & Co. 1 90
Dyroff-Hall-Wallace, Pratt & Benoist 1 105
Electric property, Landwehr & Sacks 1 7

Wells completed 1
Production 971

CLAY COUNTY

Near Flora—Orville McGuiggan & Co. 1 dry

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl
Muskegon	41	16,628	3	2	51	52	103
Isabella	2	500	0	0	8	16	24
Midland	2	750	1	0	1	1	2
Kent	0	0	0	0	4	2	6
Ottawa	0	0	0	0	0	4	4
Oceana	2	0	2	0	0	6	6
Newyago	1	0	0	1	3	8	11
Mason	0	0	0	0	1	4	5
Livingston	2	0	2	0	0	0	0
Van Buren	1	0	1	0	1	3	4
Shiawassee	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Montcalm	1	0	1	0	1	0	1
Sanlac	0	0	0	0	0	1	1
Alpena	0	0	0	0	0	1	1
Allegan	0	0	0	0	1	1	2
Tuscola	0	0	0	0	0	1	1
Huron	0	0	0	0	0	1	1
Cass	0	0	0	0	2	1	3
Mecosta	0	0	0	0	0	2	2
Lake	0	0	0	0	0	2	2
Clare	0	0	0	0	0	1	1
Gratiot	0	0	0	0	0	2	2
Kalkaska	0	0	0	0	0	1	1
Barren	0	0	0	0	1	1	2
Total June..	52	17,878	10	3	74	113	187
Total May..	45	20,425	8	3	74	114	188
Difference .	7	2,547	2	0	0	1	1

COMPLETED WELLS
MUSKEGON COUNTY

Muskegon—Dow, John R. Cox 1 200
E. Bragg, Harvey Harper & Co 1 3
Andrew Luinstra, Globe Oil 2..... 500
Conrad Nelson, Mitchell & Messeroff 1 100
John Yonker, Muskegon Oil Corp. 3 700
S. Danlioff, Muskegon Oil Corp. 2.. 200
S. Danlioff, Muskegon Oil Corp. 4.. 500
Chas. Giles, L. E. Kennedy 3..... 350
Chas. Gilbert, Swastika Oil & Gas B-3 520
Ira Hallock, C. W. Marsh & Co 3... 600
Ira Hallock, C. W. Marsh & Co. 4.. 750
Ellis I. Page, Fred Estes & Co. 150
Fee, Continental Gas & Oil 11..... 10
F. J. Durham, M. & L. Oil & Gas 1 dry
Laketon—Ralph Andree, Nelson & Witt 2 500
John Thompson, Johnson Oil and Refg. 2 500
John Thompson, Johnson Oil & Refg. 3 450
John Thompson, Johnson Oil & Refg. 4 600
John Thompson, Johnson Oil & Refg. 5 1500
John Thompson, Johnson Oil & Refg. 6 300
John Thompson, Johnson Oil & Refg. 8 700
John Thompson, Johnson Oil & Refg. 13 700
Grotefeld, Johnson Oil & Refg. 3..... 650
L. Young, Reed Oil 2 500
H. Shuler, Maire-Caswell-Kidder 2.. 240
H. Shuler, Maire-Caswell-Kidder 3.. 700
F. Eadus, A. J. Doblinger & Co. 1.... 350
Albert Young, Royal Oil 1 300
Osgood, Wiser Oil 1 250
Harm Doctor, Eagle Oil Corp 1..... 750
Eva D. Malone, East Ohio Gas 2..... 400
K. McLaughlin, Dixie Oil D-7 350
K. McLaughlin, Dixie Oil D-5 600
L. J. Jacobson, Bear Lake Oil 1..... dry
C. P. Damm, Carl P. Damm 3 700
Christopher-KeBoeuf, Mitchell & Messeroff 1 200
A. Young, C. G. Marsh & Co. 2..... 750
A. Young No. 2, C. G. Marsh & Co. 2 500
Albert Peters, United Petroleum 1.. 200
Buteau, Eureka Oil & Gas 1..... 250
Cedar Creek—F. A. Gritzner, Harvey-Bolema Synd. 1 ..... dry

Wells completed 41
Production 16,628
Dry 3

ISABELLA COUNTY

Chippewa—Keeler-McClintic, Sias Oil & Gas 1 300
Weideman, East Ohio Gas 1 200

Wells completed 2
Production 500

MIDLAND COUNTY

Greendale—Kneeland, Sias Oil & Gas 1 750
Convefse, Pure Oil 1..... dry

Wells completed 2
Production 750
Dry 1

OCEANA COUNTY

Leavitte—Bert Snow, Pennsylvania Oil & Gas 1 ..... dry
Greenwood—T. Veenstra, Decem Development 1 ..... dry

Wells completed 2
Dry 2

NEWYAGO COUNTY

Brooks—Woodward-Hatch, Melrose Oil & Gas 1 ..... gas

LIVINGSTON COUNTY

Near Fowlersville—Norris & Smith 1.. dry
South of Argentine—Halsey Hannah 1 dry

Wells completed 2
Dry 2

VAN BUREN COUNTY

Decatur—Near Baker, Gas Well, Wolverine Explora ion Dev. 1 ..... dry

MONTCALM COUNTY

East of Vestaburg—Unknown parties 1 (quicksand) ..... dry

PRESIDENT STILLMAN DISCUSSES IMPERIAL'S OPERATIONS IN CANADA

By Victor Lauriston

CHATHAM, Ontario, July 13.—On a visit to Calgary recently, C. O. Stillman, president of Imperial Oil, Ltd., discussed his company's operations in the Turner Valley Field. He said in part:

"With a daily average from Imperial subsidiaries and associated companies alone of approximately 2,200 bbls. of crude naphtha and 300 bbls. of crude oil, Turner Valley is now one of the recognized oil fields of the world. Calgary was the hub of western Canada's first essay into the realm of oildom, and it is strange that after more than a decade of intensive search throughout the prairie provinces and northward to the Arctic Circle, the center of the present activity should still be found here."

Asked what steps Imperial Oil, Ltd., was taking in connection with gas wastage in the Turner Valley, Mr. Stillman said that the company was thoroughly investigating the matter and it was probable something would be done. He could say nothing further in regard to the matter at present, however.

"Operators in the valley," said Mr. Stillman, "are alive to the necessity of avoiding any suicidal policy of competitive drilling or forced activity, and it is to be hoped they will continue in the policy of securing only such production as can be profitably assimilated without undue wastage.

"Imperial Oil, Ltd., is in no sense setting the pace for production in the field, but is merely following a carefully planned program designed to exploit to the best advantage areas which may be considered as already proven, and to further test the complex structure of the valley and the productivity of the underlying limestone wherever the prospects are brightest.

"With this end in view, the Imperial Oil subsidiaries, Royalite, Dalhousie and Foothills, are exercising all possible caution in the selection of new locations, and in many cases are merely protecting their interests by drilling offset wells and selecting sites for their other operations which are designed to add to their knowledge of the field.

Important Step Taken

"With the co-operation of other lease holders an important step has been taken toward conserving the resources of the valley and avoiding needless expenditures on drilling; whereby agreements were entered into with the Home, Advance, Lowery, Baltic, Associated, South West, Sterling Pacific, Hargal and Mayland companies. These agreements insure not only a thorough test of these properties but where production is met will provide a safe and sane policy of development."

Mr. Stillman declared there was nothing to worry about as regards the possibility of an overproduction of crude naphtha. "As far as officials of Imperial Oil can see at present, the day of overproduction in the Turner Valley Field is so remote as to be not worthy of consideration. We can use on the local market all the naphtha that can be produced in that field for some time; and when the period does arrive that the local market—Alberta—is saturated, then it will be simply a matter of getting this product from the field to other parts of the Dominion in competition with the imported product from across the line."

Mr. Stillman said there would be nothing disadvantageous in having to transport the naphtha to the east by rail. The price paid for oil in the valley would merely be based on the prevailing price paid for southern oils, plus the difference in freight haul.

"Our knowledge of the field," he added, "has greatly increased since Royalite's No. 4 demonstrated the potentialities of the lime. For this we are indebted not only to a minute study of samples from our own drilling, but to the readiness with which other operators have joined in an interchange of data, and to the assistance so readily offered at all times by the staff of the supervisory engineer.

Great Advance Made

"While there are many problems still to cope with, particularly in the bringing in of wells under high pressure, and the troubles associated with freezing or plugging of the small diameter holes, the past few years have seen a great advance toward more economic drilling operations and the solving of many complicated problems connected with the geology of the field.

"The daily average production of Imperial subsidiaries and associated companies is approximately 2,200 bbls. of crude naphtha and 300 bbls. of crude oil, which represents about 80 per cent of the entire production of the valley. Twenty-two wells have been completed and 17 are drilling, some of which have already yielded oil from the higher horizons and are now being deepened to the limestone. Although it is natural that attention should be primarily devoted to an area where successful drilling has been accomplished, the Turner Valley cannot be accepted as Alberta's final contribution to the Dominion's petroleum needs. Similar structures in the foothills may yet be productive, and increased activity is being manifested in these areas."

BUYS BOYKIN COMPANY

BEAUMONT, Tex., July 13.—The International Derrick & Equipment Co., of Columbus, Ohio, has purchased the Boykin Machinery & Supply Co., of Beaumont, Tex., which it will maintain as one of its branch equipment houses. The deal involved a consideration of $450,000. B. E. Boykin, president, and E. L. Boykin, secretary of the former Boykin company, will continue as managers of the plant under the new ownership.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for May

Runs

	Month	Dy. av.
Prairie Pipe Line Co.* ..	4,727,500	152,500
Gulf Pipe Line Co.	1,898,777	61,251
Texas Pipe Line Co.	895,813	28,897
Empire Pipe Line Co. ..	1,356,261	43,750
Magnolia Pipe Line Co. ..	2,311,910	74,577
Cosden Pipe Line Co. ...	962,893	31,061
Sinclair Pipe Line Co. ..	3,255,000	105,000
Oklahoma Pipe Line Co..	3,014,294	97,235
Other lines	6,572,000	212,000
Total May	24,994,401	806,271
Total April	23,348,339	778,278
Difference	1,646,062	27,993

Shipments

Prairie Pipe Line Co.†...	6,098,712	196,733
Gulf Pipe Line Co.	1,706,152	55,037
Texas Pipe Line Co.	1,139,132	36,746
Empire Pipe Line Co. ..	1,578,151	50,908
Magnolia Pipe Line Co...	2,326,603	75,052
Cosden Pipe Line Co. ...	825,750	26,637
Sinclair Pipe Line Co.†..	3,543,017	114,291
Oklahoma Pipe Line Co..	3,105,575	100,180
Other Lines	6,572,000	212,000
Total May	26,895,092	867,584
Total April	25,195,911	839,863
Difference	1,699,181	27,721

Stocks

Prairie Oil & Gas Co.*	37,272,000
Gulf Pipe Line and Gypsy Oil Co.	9,717,375
The Texas Company	8,483,149
Empire Pipe Line Co.	3,906,877
Cosden Pipe Line Co.	3,610,277
Sinclair Crude Oil Pur. Co.*	20,530,000
Magnolia Petroleum Co.	9,849,110
Oklahoma Pipe Line Co.	3,213,262
Carter Oil Co.	11,250,244
Other lines*	10,687,000
Total May	118,519,294
Total April	119,418,334
Difference	899,040

*Estimated. †Prairie and Sinclair shipments include Texas crude oil.

Note—Stocks do not include approximately 5,400,000 bbls. of crude oil held in storage on private tank farms and leases.

EASTERN PIPE LINE REPORT

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for April and May:

	Apr., '29	May, '29
Nat. Transit	220,177.96	253,769.83
S. W. Pa. P. L.	96,471.45	100,936.95
Eureka P. L.	361,294.32	380,915.89
Buckeye P. L. (Macksburg)	335,779.62	343,829.07
Buckeye P. L. (Cleve.)	12,265.09	12,404.92
Buckeye P. L. (Lima, etc.)	103,296.03	111,166.94
Indiana P. L.	5,130.73	5,648.56
Cumberland P. L. ...	203,144.51	199,988.52
N. Y. Transit	31,202.58	31,526.85
Tidewater P. L.	233,576.47	260,931.30
Pure Oil	60,020.89	62,790.66
Emery P. L.	65,713.91	69,891.53
Paragon Dev.	18,255.49	17,045.54
Stoll Oil Ref.	6,979.37	6,113.39
Total	1,753,308.42	1,856,959.95
Daily average	58,443.61	59,901.93

Note—Indian Refining Co. also reported other receipts of 308,586.09 bbls. Paragon Refining Co. had other receipts of 186,357.33 bbls. Paragon Development had other receipts of 391.62 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky for April and May.

	Apr., '29	May, '29
Nat. Transit	459,812.50	571,534.68
S. W. Pa. P. L.	363,716.29	384,900.26
Eureka P. L.	248,843.98	242,388.07
Buckeye P. L. (Macksburg)	191,498.74	219,775.55
Buckeye P. L. (Cleve.)	1,941.40	2,185.24
Buckeye P. L. (Lima, etc.)	1,323,167.62	1,597,379.34
Indiana P. L.	1,380,184.34	1,456,199.10
Cumberland P. L. ...	184,506.68	212,951.47
Southern P. L.	71,454.97	.....
N. Y. Transit	186,779.49	282,843.83
Northern P. L.	179,598.23	190,228.92
Tidewater P. L.	179,487.31	210,039.70
Pure Oil	57,602.63	61,580.15
Emery P. L.	63,977.39	74,596.34
Paragon Ref.	185,079.68	186,897.16
Paragon Dev.	14,456.13	19,208.47
Total	5,092,107.38	5,712,708.28
Daily average	169,736.91	184,280.91

Indian Refining Co. reported other deliveries of 222,665.75 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of April and May:

	Apr., '29	May, '29
Nat. Transit	716,361.68	800,104.62
S. W. Pa. P. L.	423,480.13	466,368.92
Eureka P. L.	1,305,585.15	1,224,524.89
Buckeye P. L. (Macksburg)	517,342.15	463,437.44
Buckeye P. L. (Cleve.)	36,739.70	54,068.74
Buckeye P. L. (Lima, etc.)	1,977,236.44	1,917,019.67
Indiana P. L.	541,456.22	507,698.71
Cumberland P. L. ...	589,250.23	581,865.71
Southern P. L.	472,810.29	488,042.66
N. Y. Transit	319,023.52	233,636.63
Northern P. L.	384,395.23	408,913.03
Tidewater P. L.	1,317,878.72	1,291,934.65
Pure Oil	11,307.22	13,042.02
Emery P. L.	14,291.05	9,439.08
Paragon Ref.	18,502.92	17,668.51
Indian Ref.	68,506.50	152,604.26
Paragon Dev.	8,946.70	7,540.83
Tuscarora	255,038.02	265,649.33
Total	8,978,171.85	8,903,559.70
Decrease	23,385.66	74,612.15

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern Pipe Lines at the close of April and May showing the gross stocks of the above fields:

	Apr., 1929	May, 1929
Pennsylvania	3,399,836.77	3,350,662.61
Lima	557,347.94	587,235.33
Kentucky	781,911.36	787,127.03
Mid-Continent	3,956,708.61	3,788,393.60
Illinois	282,367.17	390,141.13
Total	8,978,171.85	8,903,559.70

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1926	1927	1928	1929
January	55,630	56,209	52,904	51,749
February	60,394	61,298	57,002	51,833
March	61,644	63,247	57,485	54,252
April	63,019	60,927	56,812	58,444
May	60,580	60,284	62,067	59,902
July	63,206	58,674	57,144	.....
August	61,815	60,870	57,745	.....
September	64,639	60,285	53,487	.....
October	161,132	147,080	58,100	.....
November	67,774	57,275	53,565	.....
December	58,755	53,089	52,025	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1926	1927	1928	1929
Jan.	156,056	141,227	146,465	165,721
Feb.	159,488	138,534	167,368	159,387
Mar.	150,239	133,777	158,883	161,474
April	152,374	140,227	172,935	169,737
May	160,998	144,594	180,559	184,281
July	160,045	151,850	189,470	.....
Aug.	151,929	188,653	192,853	.....
Sept.	158,915	144,213	194,138	.....
Oct.	161,132	147,036	176,000	.....
Nov.	172,608	150,975	176,398	.....
Dec.	136,428	144,504	173,572	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1927	1928	1929
Jan.	9,718,008	12,276,710	7,596,564
Feb.	10,119,162	12,180,419	8,738,835
Mar.	10,794,044	12,239,725	9,002,058
April	11,112,295	11,740,125	8,978,172
May	11,359,381	11,602,468	8,903,560
June	11,493,673	11,287,678	.....
July	11,458,128	10,819,321	.....
Aug.	11,989,115	10,236,742	.....
Sept.	12,212,716	9,660,910	.....
Oct.	12,047,661	9,229,709	.....
Nov.	11,939,740	8,366,553	.....
Dec.	12,340,297	7,539,555	.....

Franklin Pipe Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the month named and not counted in the stocks and averages reported above:

	Runs	Shipments	Stocks
1928—			
June	3,153.08	2,779.03	17,922.58
July	2,902.50	3,628.03	17,197.04
Aug.	2,874.11	2,350.13	17,721.04
Sept.	3,320.31	5,255.42	15,385.93
Oct.	1,289.93	538.89	17,551.33
Nov.	2,663.53	788.47	19,426.99
Dec.	3,053.60	3,167.53	19,426.99
1929—			
Jan.	2,099.90	.....	19,313.06
Feb.	2,469.47	6,873.20	17,009.23
March	3,330.82	3,595.01	16,745.04
April	4,864.07	4,243.59	17,365.53
May	2,688.59	2,455.54	17,598.57

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, June 1	2,412,509.36
Runs from wells	581,291.12
Other receipts	468,875.35
Regular deliveries	617,578.55
Other deliveries	443,846.85

The amount of Illinois oil run by the Tidewater Pipe Co. in May was 27,690.56 bbls. Deliveries were 56,234.28 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

	Runs	Deliveries
1928—		
June	608,552.49	625,087.33
July	612,286.49	565,678.37
August	639,074.85	671,864.02
September	570,307.91	737,293.50
October	626,147.64	626,290.40
November	576,332.88	702,589.93
December	584,633.00	491,517.26
1929—		
January	570,727.38	545,084.66
February	517,330.17	503,387.70
March	728,319.67	586,049.60
April	515,374.27	654,297.96
May	608,981.60	673,812.83

Tidewater Pipe Co., Ltd., also delivered in May, 151,979.23 bbls. Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
December	4,968	2,968	24,675	18,806	3,064	54,484	.....	.....	.....	.....	2,419	56,903
January	15,838	.....	16,676	11,838	7,938	52,290	.....	.....	.....	.....	5,161	57,451
February	14,214	.....	33,750	17,350	11,607	81,521	.....	.....	.....	.....	3,750	85,271
March	19,903	968	31,358	18,581	7,355	78,065	.....	.....	.....	.....	.....	78,065
April	16,667	.....	32,333	13,233	2,234	64,467	.....	.....	.....	.....	7,333	65,200
May	16,226	2,416	31,326	10,806	2,129	62,903	.....	.....	.....	.....	.....	62,903

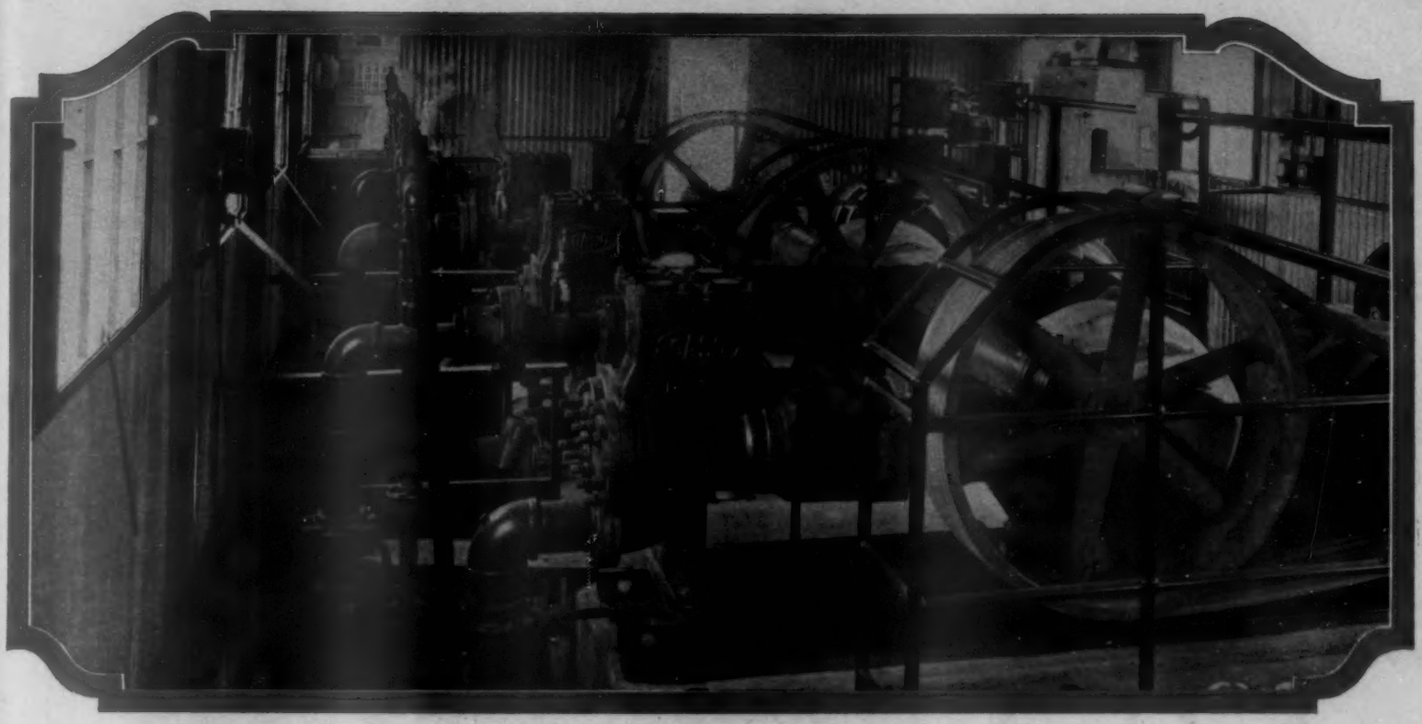
AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
December	15,419	15,968	140,871	42,323	8,709	223,290	2,903	35,129	2,355	.....	40,387	263,677
January	11,936	8,903	130,065	34,871	15,709	201,484	.....	34,808	4,098	1,287	40,193	241,677
February	13,750	15,071	135,179	32,750	17,893	214,643	.....	34,357	821	143	35,321	249,964
March	18,548	26,064	145,516	39,162	28,162	257,452	.....	42,581	2,322	.....	44,903	302,355
April	19,733	18,367	137,233	50,267	22,567	248,167	6,867	25,066	10,367	1,500	43,800	291,967
May	29,806	19,258	138,000	49,936	22,322	259,322	6,677	26,323	3,000	1,323	37,323	296,645

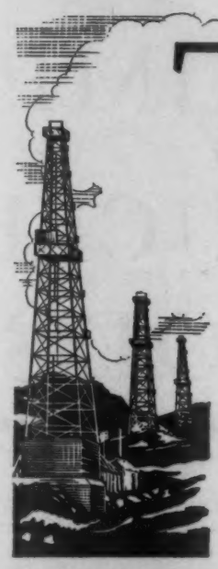
GROSS PRODUCTION IN UNITED STATES FOR 12 MONTHS

(In barrels of 42 gallons)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
1928—										
June.	Month	19,164,244	18,482,981	19,877,936	3,202,050	3,075,911	3,074,423	2,425,470	3,401,000	71,704,014
	Daily average	638,808	616,099	662,598	106,735	102,530	69,147	80,849	113,367	2,390,134
July:	Month	19,754,458	18,809,188	22,055,737	3,171,546	2,792,139	2,238,090	2,492,586	3,487,000	74,800,746
	Daily average	637,241	606,748	711,475	102,308	90,069	72,131	80,406	112,484	2,412,927
August:	Month	19,444,899	20,840,804	22,339,131	3,147,058	2,711,787	1,983,264	2,561,340	3,556,000	76,590,783
	Daily average	627,255	672,284	720,448	101,518	87,477	64,170	82,640	114,709	2,470,670
September:	Month	18,806,169	22,456,880	21,554,289	3,047,350	2,540,070	1,830,225	2,432,430	3,229,000	75,998,373
	Daily average	630,372	748,562	718,207	101,575	84,669	61,007	81,047	104,300	2,533,279
October:	Month	19,430,992	23,421,071	22,176,353	3,058,460	2,652,484	1,836,221	2,571,522	3,613,000	78,789,903
	Daily average	626,806	755,841	715,376	98,660	85,564	59,233	82,952	116,516	2,540,964
November:	Month	19,907,526	23,078,680	20,791,798	2,977,800	2,476,080	1,801,914	2,383,870	3,348,000	75,770,668
	Daily average	663,584	735,956	693,059	99,260	82,536	60,064	79,529	111,600	2,505,689
December:	Month	21,674,702	22,425,722	22,180,102	2,988,400	2,521,571	1,846,841	2,389,040	3,581,000	79,407,379
	Daily average	695,958	723,410	715,487	96,400	81,341	59,576	73,840	115,516	2,561,528
1929—										
January:	Month	23,385,939	22,417,030	23,412,192	2,861,641	2,453,526	1,807,887	2,076,070	3,379,000	81,793,285
	Daily average	754,385	723,130	755,232	92,311	79,146	58,318	66,970	109,000	2,638,492
February:	Month	22,200,707	20,448,764	20,816,209	2,557,968	2,154,194	1,569,930	1,965,656	3,122,000	74,935,428
	Daily average	796,454	730,313	743,424	91,356	76,936	56,068	70,202	111,500	2,676,268
March:	Month	24,324,729	20,838,262	24,358,592	2,951,076	2,241,734	1,756,153	2,195,823	3,503,000	82,169,369
	Daily average	784,669	672,202	784,669	95,196	72,314	56 650	70,833	113,000	2,650,623
April:	Month	23,295,060	20,235,390	23,493,097	3,106,980	2,188,680	1,702,497	2,085,030	3,516,000	79,632,734
	Daily average	776,502	674,513	783,102	103,566	72,956	56,750	69,501	117,200	2,654,090
May:	Month	24,053,351	21,345,453	24,488,751	3,665,099	2,220,158	1,713,261	2,241,641	3,596,000	83,323,714
	Daily average	775,915	688,563	789,960	118,229	71,618	55,267	72,311	116,000	2,687,363
Total 12 months		255,544,777	253,810,205	267,544,667	36,735,330	30,028,346	22,166,705	27,726,278	41,330,000	934,886,298
		700,123	695,371	732,999	100,645	82,269	60,731	75,962	113,233	2,561,332



I.T.I.O. selects GASO Pumps for Water Service in Oklahoma City Field



THE illustration shows three Gaso Fig. 710 Duplex Enclosed Power Pumps, with V-rope drive from electric motors, at a water station of the Indian Territory Illuminating Oil Company in the Oklahoma City Field. These three pumps are capable of handling 36,000 barrels of water per day.

Flood lubrication of all working parts—TIMKEN TAPER ROLLER pinion bearings—genuine babbitt main bearings—cast steel solid herringbone gears — mounted in center on steel crank shaft — are features which insure the dependability in constant service demanded of pumps furnishing water for deep drilling operations.

The Gaso Fig. 710 Pump can be arranged for any type of drive: (1) Pulley for belt drive; (2) Direct connected through flexible coupling to gas, gasoline or Diesel engine; (3) Motor through silent chain or reduction gears; (4) "V" Rope drive to motor or engine. Write, wire or phone for detailed information.

GASO PUMP & BURNER MFG. COMPANY
Tulsa, Oklahoma

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